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ORIGINAL DEPARTMENT.

LECTURE.

ANTI-PARASITIC TREATMENT OF TUBERCULOSIS. ANTISEPTIC PULMONARY SURGERY.

BY M. RICKLIN,

Physician to the Paris Hospitals.

GENTLEMEN: We have already mentioned the clinical experiments undertaken with the view of arresting the progress of pulmonary tuberculosis, by means of anti-parasitic medication, experiments inspired by the recent discoveries of M. Koch, and carefully studied in the principal hospital of Berlin.

We have already spoken of the adventurous nature of these experiments, which were, in many cases, reprehensible, inasmuch as the patients were compelled to inspire into the lungs irritating and toxic vapors, such as alcohol, solutions of corrosive sublimate, nitric acid, etc. With honorable frankness, those who have undertaken these experiments have confessed that the results have been deplorable. If we return to the consideration of this question, to relate in greater detail the experiments undertaken at Berlin in the services of MM. Leyden and Hiller, it is to demonstrate how great a mistake is committed by those observers who, in the treatment of diseases, supposed to be of a parasitic nature, think of the germ or microbe and the means proper to bring about its destruction, and who, to use the picturesque expression of M. Bouchardat, occupy themselves only "de donner la chasse au microbe."

The clinical experiments of M. Hiller were made on ninety-one patients, who yet presented serious chances of cure, that is to say, on patients in whom, according to the physical signs, the pulmonary lesion had not as yet progressed very far, the loss in weight being little marked, the appetite good, little or no fever, and the general health sufficiently good to enable the patients to take exercise in the open air in favorable weather.

Here is an enumeration of the anti-parasitic substances employed for the purpose of arresting the progress of the pulmonary lesion: Corrosive sublimate, iodoform, bromine, ethylic alcohol, methylic alcohol, sulphydric alcohol, arsenious acid, boric acid, salicylic acid.

As regards the mode of administration, inhalations of the medicaments in gaseous form and in vapor, the use of solutions with the atomizer, direct injections into the pulmonary parenchyma, subcutaneous injections, and also administration per os, were all employed. In several cases the same subject was placed under more than one of these forms of medication.

As regards the results obtained, here is what M. Hiller says on the subject: No matter what remedy was used, or what its mode of administration, it has been impossible to arrest the progress of the tuberculous process in the lungs, or to induce the disappearance of the bacilli in suspension in the expectorated matters. It is true, that during the course of anti-parasitic treatment, temporary remissions have been observed; but they have not occurred with sufficient frequency, and have not coincided sufficiently with the nature or duration of the course of treatment pursued, to enable us to assert a relation of cause to effect between the treatment and the improvement obtained.

The treatment by corrosive sublimate seems to

have given the most satisfactory results, and is the only one on which extensive details are furnished.

It is true, also, that this form of medication has been the object of the most numerous experiments; that it has been applied of preference to patients who presented the best chances of ultimate recovery; and that, in connection with the special treatment, the patients received a very substantial nourishment, and were given cod-liver oil, cognac, and acid phosphate of lime, as adjuncts of treatment.

Usually the corrosive sublimate was administered hypodermically, in the daily dose of one or one and one-half cubic centimetres of a solution of one part of the salt to one thousand of water. Forty-four patients were treated in this way. In more than one-half the cases, the treatment was suspended after the first few injections, either because the patients refused to endure the pain produced by the introduction of the needle, or on account of the development of accidents we will mention later on. With nineteen patients, it was possible to continue the treatment to the limits prescribed at the début—that is, to make forty injections in the course of a month and a half.

Of these nineteen patients, five died in the course of the first few weeks. The twelve others manifested an amelioration which M. Hiller qualified as apparent only, but which enabled the patients to quit the hospital.

They were patients who presented slight lesions at the apex; their general health was satisfactory at the début of treatment, and remained so during its course; in some cases amelioration in this respect was noted, the stethoscopic signs were less evident, and expectoration diminished.

On several occasions during the course of treatment, a diminution in the number of bacilli found in the expectoration was remarked, a result to which M. Hiller does not attach great importance, because the same thing was observed in phthisical patients under no matter what form of treatment. In no case, however, did the bacilli of Koch entirely disappear from the matters expectorated.

In general, the injections of corrosive sublimate were very badly supported; they induced, in many of the patients, stomatitis, sialorrhea, digestive troubles, anorexia, a bad taste in the mouth, diarrhœa, trembling, insomnia, prostration, etc.

In advanced cases of phthisis, says M. Hiller, with patients confined to the bed, having more or less fever, corrosive sublimate has an absolutely deleterious action; it determines prostration of the little remaining strength, and may accelerate the fatal termination, as he observed in one of his cases.

In two cases of laryngeal tuberculization, with but very slight participation of the lungs, M. Hiller had recourse to inhalations of a solution of sublimate by means of the atomizer.

These inhalations were of no benefit, but provoked stomatitis, with a metallic taste in the mouth, and digestive troubles.

Both patients have since died in the phthisical division of the hospital.

With three other patients experiments were made by direct injections of sublimate into the pulmonary parenchyma. With the ordinary hypodermic syringe two cubic centimeters of a 1 in 1,000 solution of sublimate was introduced daily into the lung through an intercostal space.

"The sublimate produced an extraordinary irritation of the pulmonary parenchyma, and the inevitable contact of the solution with bronchial mucous membrane, induced fits of coughing of so violent a nature, that in one case a grave attack of hemoptysis ensued. With these three patients it was found necessary to arrest the experiment after the first days."

We would mention also the experiments of M. Albrecht, undertaken with the same views, but relatively inoffensive; he submitted his tuberculous patients to inhalations of oxygen chemically pure, without changing the usual alimentary regime of the patients, or administering any other medicament; he affirms that he has been thus successful in arresting the progress of consumption; the bodily weight of the patients was maintained, and in some cases augmented, and, at the same time, the bacilli of Koch, contained in the expectoration, gradually diminished.

On the other hand, M. Albrecht has inoculated guinea pigs with tuberculosis, in order to submit them to inhalations of oxygen, when signs of the consumptive disease appeared. The animals thus treated usually lived more than six months, while those who were not submitted to oxygen inhalations generally succumbed within the first four. It must be admitted that these results are too vague to sufficiently edify us on the results of oxygen inhalations in the treatment of pulmonary phthisis in the human subject.

We have already mentioned, in another place, certain rather hazardous attempts at surgery of the lung, undertaken with the view of extending the benefits of antiseptic medication, to the treatment of suppurative pulmonary affections.

Already in 1873 Mosler made an incision into a superficial pulmonary excavation in order to make antiseptic injections, but without success.

More recently, Fenger and Hollister (*American Journal*, 1881,) have collected in a memoir on the subject, six cases of pulmonary excavations, supervening after acute affections, treated by incision and consecutive drainage, with one case of recovery. These same authors have related recently (*London Med. Record*, 1882,) a case of pulmonary cavern, of gangrenous origin, situated in the middle lobe, treated by incision and drainage with favorable results. A Swedish physician, M. E. Bull, (*Nordisk Med. Archiv.*, t. 13) had recourse with success to incision and drainage in a gangrenous cavern of the left apex in a young woman twenty-three years of age; the patient recovered. The same author has published a second very interesting memoir, on the same subject, in the fourteenth volume of the same journal, in which he mentions a case of encysted pneumothorax, which was taken for a pulmonary cavern, and incised as such; the patient survived the operation but a few days.

We have already mentioned an unfortunate attempt in this direction by M. Sokolowski, of Berlin, who injected carbolic and iodine solutions into a pulmonary cavern with the idea of preventing absorption into the general system of the putrid secretions.

M. Koch, of Berlin, (*Deut. Med. Wochenschrift*) has repeated this attempt on two subjects, affected with putrid bronchitis and bronchiectasis, but instead of injecting the solutions with a hypodermic syringe through the intact thoracic parietes, he resected a rib with the galvano-cautery. One of the patients succumbed, and the other was not cured at the time the facts were published. Nevertheless, the experimenter considered it necessary to give the precise indications for this method of treatment.

In the service of Prof. Gerhardt of Wurzburg, M. Seiffert (*Berl. Klin. Woch.*, 1883), in two cases of bronchiectasis, has injected into the pulmonary parenchyma, at the presumed site of the bronchial dilatations, a three per cent. solution of carbolic acid, two cubic centimetres at each injection. These injections were made with a hypodermic syringe, provided with a very long needle. With the first patient they seemed to diminish the abundance of the purulent expectoration. The subject of the second observation succumbed during the course of treatment.

An Italian physician, M. Bacchiné (*Imparziale*, 1883) operated by incision on a woman, 27 years of age, who presented the signs of pulmonary abscess after an attack of pneumonia. An exploratory puncture confirmed the diagnosis. A little later the purulent collection opened into the bronchial tubes, and the patient expectorated a great quantity of pus. It was at this period that a large incision was made in the second intercostal space, and the purulent expectoration ceased. Towards the eighth day, however, the patient expectorated on several occasions fragments of pulmonary tissue in a gangrenous condition. The cure was not complete at the time the observation was published.

Where then will these audacious experiments be arrested?

We shudder when we consider that the possibility of extirpating a portion or even the entire lung has been affirmed by Gluck, Block, and Schmidt, after numerous experiments.

COMMUNICATIONS.

NOTES ON HAY FEVER.

BY CHARLES E. SAJOUS, M. D.,

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[Paper read before the Philadelphia Laryngological Society on November 23, 1883.]

In the spring of 1881, while investigating the merits of glacial acetic acid in the treatment of intra-nasal hypertrophies, I came across two cases who stated in the course of their general history, that they were subject to hay fever. Both had middle turbinate hypertrophies, complicated in one case with a posterior growth causing complete stenosis of the left narium. Glacial acetic acid was used to destroy the anterior growths, while the posterior was extirpated with Jarvis' snare. Bearing the hay fever history in mind, I applied the acid over much greater surface than was necessary for the destruction of the hypertrophies, hoping by this means to diminish the sensitiveness of the mucous membrane primarily affected in the course of the hay fever, and if not prevent, at least diminish the intensity of the accesses. After three months' treatment the cases were discharged with directions to call occasionally. When the time came for the hay fever to manifest itself, I watched the cases closely. The symptoms did not recur. Since then, like results have been obtained by other laryngologists, with galvano-cautery.

Two theories are at our disposal to explain the *modus operandi* of the treatment in bringing about such a result: the one, that the growths had been the cause of the trouble by reflex action and that their removal had eradicated that cause; the other, that the destructive agent employed had so altered those parts primarily affected in the course of an attack, that they were no longer sensitive to the foreign elements acting as exciting cause.

That intra-nasal pressure sometimes causes reflex asthma there is no doubt; but the fact that many cases of hay fever are free of intra-nasal growths sufficient to cause any degree of pressure when the cavernous tissue becomes dilated through the action of the irritant, renders the theory very questionable.

The second proposition appears to me to be more tenable, and subsequent results have shown that it is worthy of serious consideration.

Hay fever is due to an idiosyncrasy on the part of certain individuals to become affected by certain emanations. The experiments of Blackley show conclusively that the pollen of the majority of plants is the agent that produces the impression through which the symptoms are manifested, and that this pollen, being disseminated throughout the atmosphere at certain fixed seasons, these symptoms present themselves only at fixed seasons. According to Blackley, Phœbus, and others, it first attacks the nasal mucous membrane; this then is the seat of the morbid irritability. In our cases, the applications of the acid caused an organic transformation on the surface of the membrane, which naturally altered its sensibility and destroyed what morbid irritability might have attended the nervous filaments distributed over them. In other words, its condition was so changed that it could no longer become influenced by the presence of the pollen. This theory is corroborated by the assertions of the authors cited above as to the area of primary irritability, and is strengthened by the fact that an intimate relationship between this area of irritability and the seat of its most remote and distressing, although not always appearing symptom, asthma, can easily be traced.

Asthma is defined by Salter† as being due to a morbid proclivity of the musculo-nervous system of the bronchial tubes, to be thrown into a state of activity. "It consists of a perverted sensibility of the nervous system in its receiving and transmitting on to the muscle, as a stimulus to contraction, that of which it should take no cognizance. * * * The vice consists not in the production of any special irritant, but in the irritability of the part irritated."

In hay asthma, this theory can well be adapted. The affection first manifesting itself in the nasal mucous membrane, this then is the seat of that morbid irritability; from it is transmitted, through the nervous system, that which causes spastic contraction of the fibre cells of the organic muscles, which have been demonstrated to exist in the bronchial tubes.

The applications were made principally over the surface of the middle turbinated bone, slightly, if at all, to the superior turbinated, and also over the upper surface of the inferior.

The mucous membrane covering these parts, and the upper and back part of the septum, is supplied by four or five of the nasal branches of the spheno-palatine ganglion, which enter the back part of the nasal fossa by the spheno-palatine foramen. This ganglion possesses besides its motor and sensory roots, a sympathetic root which is derived from the carotid plexus through the vidian, and forms the connecting link between the nasal membrane and the sympathetic system. Continuing down from the carotid plexus, we come to the posterior pulmonary plexus, formed not only by the branches of the sympathetic, but also by some from the pneumogastric. Thus combined, they follow the ramifications of the air-tubes, and small ganglia dotting their course, their ultimate filaments become lost in the minute unstriped muscles of the bronchial tubes.

We thus have intimate and direct inter-communication between the nasal mucous membrane and the sympathetic system through the largest of its ganglia, and between the latter and the bronchial muscles through the pulmonary plexus, in which the pneumogastric takes an important part.

The nervous system, however, is not always the link that connects the area of irritability and the seat of bronchial manifestations. I am alluding to those cases in which the asthma is due to catarrhal inflammation gradually extending from the nasal membrane, down along the pharynx, trachea and bronchi. Here the peculiar irritability of the bronchial muscles manifests itself only after the pulmonary tract has become invaded by the inflammatory process, showing distinctly that it is only secondary to this process. There is always a certain amount of bronchial catarrh accompanying the asthmatic symptom, whether the stimulus be transmitted directly through the nervous system, or by the continuation of the inflammation from the nose downward; but in the latter, the

† Asthma; its Pathology and Treatment, Wood's Library. 1882.

asthma comes on some time after the first manifestations of the disease, while in the former, the dyspnœa is an evident symptom at the outset.

In a case which I have had under observation these last two years, and who prefers to resort to palliative measures when the attack comes on than to submit to surgical interference, the first symptom is palpebral itching and acute coryza with swelling of the nasal mucous membrane, and consequent difficulty in breathing through the nose. After a few days, pharyngitis sets in, followed shortly after with hoarseness. Last of all comes the asthma, with slight cough and scanty expectoration and a feeling of constriction about the chest, auscultation eliciting sibilant, moist sounds. When not treated, this continues a couple of weeks, the cough and expectoration gradually increasing, and when the latter becomes abundant, relief is felt, and the patient recovers entirely. When, however, treatment directed to both the spasmodic element (lobelia and belladonna) and the inflammatory condition (chloride of ammonium, bromide and iodide of potassium) is administered, the patient recovers in a few hours, whereas either class of remedies administered alone produces no effect whatever. Atropia was even pushed far enough to cause decided toxæmic manifestations; the dry throat, photophobia and superficial heat only served to render the patient more miserable. The case is distinctly one of hay asthma; the symptoms occur yearly at stated periods, are increased by exposure to the emanations that originally caused them, and are all so characteristic of the disease that the diagnosis cannot be doubted.

I believe the branches of the spheno-palatine ganglion to be but slightly if at all involved in the pathology of this variety of hay asthma. It is through the gradual extension of the inflammation downward, that the peculiar liability of the minute bronchial muscles to become spastically contracted is excited. It is only in this that it differs from the other. In both, the exciting cause and the ultimate results are the same, but in the one the link between them is the nervous system; in the other, the mere continuity of tissue.

Again, two idiosyncrasies exist in each variety, one consisting in the proclivity of becoming affected by the pollen, the other in that of the bronchial muscles to be excited. The latter does not differ from ordinary asthma, but it requires the peculiar action of the pollen to become induced.

The *modus operandi* of the treatment in the catarrhal form is somewhat different. Its object is not only to prevent the liability of the intranasal membrane from becoming influenced by the pollen, but to place it in such a condition that an inflammatory process of any importance become impossible. Both objects are attained by perverting by a destructive agent the sensibility of the nervous elements: the liability of infection is destroyed by it, while the blood supply to the membrane proper is limited to its smallest possible degree, through the mechanical constriction it gives rise to.

When the nasal membrane becomes inflamed, the erectile tissue underlying it becomes overloaded with blood. If a few applications of glacial acetic acid for instance, are made over it, a destructive metamorphosis will take place on the surface, which will induce, through cicatricial contraction, pressure on the underlying erectile tissue, and limit its power of expansion, but if these are continued for some time, the epithelial layer will become so thinned, that the fluid will penetrate *into* the erectile tissue, and render expansion impossible by destroying its internal cavernous frame-work. This I have observed in all the cases of hypertrophic catarrh I have treated by destructive agents, and in persons who are frequently affected with "erectile" coryza, the most disagreeable symptom, difficulty in breathing through the nose, can be permanently relieved by a couple of incisions with the galvano-cautery knife.

I principally alluded te glacial acetic acid, because this agent had been used in all the cases on which this paper is based. But I must state that of late I have abandoned its use, because, in order to obtain a satisfactory result, it has to be applied over an extensive surface, and gives rise to severe pain. Galvano-cautery has served me better, requiring but few applications, and being painless if properly used.

An important point which must not be overlooked in the treatment of this affection in whatever form it may present itself, is the influence hypertrophies of the nasal membrane have in increasing its irritability and the intensity of the symptoms. These should first be attended to, and if the treatment employed be one of a destructive nature, the organic changes induced by it in the mucous membrane proper will often be sufficient (as it was in the two illustrative cases, and in several cases treated afterwards) to annul its abnormal nervous irritability.*

*This in my opinion was the modus operandi of the treatment in the cases cured by two distinguished authors, who consider hay fever as entirely due to nasal hypertrophies.

This is especially the case when galvano-cautery is used; but it should not be relied upon however. To reduce these hypertrophies I pass the cutting edge of the cautery knife longitudinally through them. Then, after a couple of weeks, I again apply the cautery knife lightly with its flat side on the membrane, and repeat that procedure in as many sittings until the whole surface, extending over the middle and inferior turbinated bones is well singed. Where there are no hypertrophies, the second part of the treatment is alone resorted to.

As an illustrative case, I will cite that of a young lady who applied to me last summer, and whose accesses had appeared regularly for several years. Six applications of glacial acetic acid were made, which not only prevented the symptoms but made her nasal membrane absolutely invulnerable to the effects of the pollen. As a test she exposed herself as much as possible to the emanations of the plants which she knew to be the most liable to occasion a manifestation of her idiosyncrasy, and went even so far as to place bouquets in her bed-room, and to approach a field of clover, her most dangerous enemy. It might be suggested that perhaps without treatment, the same would have been the case, the idiosyncrasy having ceased to exist in the patient; this is not only improbable, but a fact, which I have held in reserve and which caused me to choose this case as an illustrative one, renders the suggestion untenable: one of the symptoms, palpebral pruritus, occurred, showing that the idiosyncrasy still existed in the patient, but that the organic alteration in the nasal membrane had annulled its liability to pollen infection, thus preventing all symptoms secondary to its abnormal irritability, but not that manifested in the palpebral conjunctiva which is irritable *per se*, and the nervous connections of which were not of a nature to involve other symptoms.

It would seem that such a radical alteration of the nasal membrane would occasion either a loss of, or at least impair, the sense of smell. This is not the case if the applications of the galvano-cautery are properly made. The "olfactory membrane," which in man is yellow, covers the upper part of the septum, the superior turbinated bone and the upper part of the middle turbinated; it is consequently but slightly involved in the treatment. On the contrary, olfaction is often improved by it, the reduction of the tumefaction facilitating the passage of air, and consequently that of the odoriferous particles.

1630 *Chestnut St.*

A CASE OF POSSIBLE POISONING BY "CHLORIC ETHER" AND A BROMIDE.

BY DR. S. M. WARD,
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I am indebted to Dr. J. J. Ward, the attending physician, for the notes of the following interesting case.

It is impossible to state with any certainty just what the "chloric ether" taken by Dr. A. was, or how much was swallowed. His wife stated that for several years he had been in the habit of taking it in order, as he expressed it, "to get a morning nap." She also stated that he usually put two (2) teaspoonfuls in a two (2) ounce vial of water, and drank it as occasion required. An empty bottle, of the capacity above stated, smelling strongly of chloroform, was found by his bedside, and the odor was strongly perceptible in the breath—not in the urine though—during the whole time he was under observation. "Chloric ether," according to the formula of a druggist who formerly prepared it for the deceased physician, contains one ounce of chloroform to the half pound of alcohol. I find, however, that it is a variable compound, and is used sometimes as strong as fifty per cent. of the anæsthetic. How strong Dr. A. made it is entirely conjecture. There is evidence that he took in addition some bromide, but what the salt was, or how much of it was swallowed, is unknown.

In order to ascertain what effect a combination such as the above might have, I gave a large, healthy cat twenty grains of bromide of ammonium, together with twenty drops of chloroform and one hundred and sixty drops of alcohol. Almost immediately the animal became flaccid and limp, pupils largely dilated, respiration greatly accelerated; soon a condition of excitement came on, followed by cries, as if in pain; finally a disposition to sleep became manifest, which was resisted and overcome, and ultimately the animal scampered away at a lively gait.

The death certificate in Dr. A.'s case was made out apoplexy, but it seems questionable whether this was correct. The attending physician himself is of the opinion that it was not. The following are his notes:

A man, aged sixty-eight years, previous health generally good, having led an active life as a practitioner of medicine for forty-three consecutive years, nearly six feet high, weight about one hundred and sixty pounds, thin and spare, with large bones, was found insensible in his bed by

his wife, whom he had awakened by his stertorous breathing at half-past two o'clock, Wednesday morning, September 26, 1883. I was summoned and arrived at his bedside in about ten minutes from the time his wife was awakened. Found him lying nearly on his back, with his head turned a little towards the right, breathing slowly and with some stertor, pulse irregular, about forty per minute. In about fifteen minutes the pulse at the wrist and respirations became imperceptible; artificial respiration was begun, and in a few minutes the pulse was once more recognizable, and he breathed with a slight stertor. Temperature normal, countenance pale, and a slight drawing of the face towards the left. Limbs very flaccid, entire failure of pupils to respond either to touch or light. Suddenly, his stertorous breathing again ceased, the pulse again was hardly perceptible, and about the same condition of affairs obtained as before. Artificial respiration again brought a change, and a slight stertor was again noticeable, with a fuller radial pulse. Shortly his stertor ceased, and his respirations were noiseless and shallow. While in this condition Dr. Eastgate saw him. We both thought the case one of "apoplexy." Dr. A. had no more sinking spells, and nearly an hour having elapsed, we noted his condition as follows: Pulse 50 per minute; respiration 38, slight stertor; temperature normal; eyes half-opened, with a film over both, more marked over the right; face drawn towards the left; no response of pupil to light or touch; somewhat cyanosed, especially at the finger-tips; body surface naturally warm to the hand. He remained in this condition, or nearly so, until 10 a. m., Thursday, being seen at 9 a. m. by Dr. B. R. Bevier, who agreed in the diagnosis. About ten o'clock there was a regurgitation of the stomach, and about a pint of material containing food, followed by some dark, grumous matter, passed his lips. This smelled strongly of chloroform. The drawing of the face was now changed, being more towards the right, but not so strongly as it had formerly been towards the left; eyes completely closed, right pupil largely dilated, left normal, no response to either light or touch. There seemed to be no paralysis of any other muscles except that noted above.

1 p. m. There was a slight movement of the muscles of the forehead, as in scowling, also a slight effort at vomiting. He ejected about a half pint of a darkish fluid, ropy in its consistency. This also gave a strong odor of chloroform. His extremities now began growing cold, his nose being especially so. There was less drawing of the face. Pulse 90, and feeble; respiration 40. He now began groaning, as if in pain, and seemed to recognize his name if called in a loud voice.

4 p. m. Thirteen hours from the time he was first seen, he would reply to questions and could swallow with some difficulty; was catheterized, and about a teacupful of urine was drawn, which unfortunately was not examined. Stimulants were now pushed by the stomach, rectum, and hypodermically, and the treatment by sinapisms and hot applications kept up. He could protrude his tongue in a straight line, talk some, enough to tell us that he was very thirsty, and had great pain in his stomach.

5 p. m. His face is natural, right pupil is still somewhat dilated, though not nearly as much as before, left normal, temperature 97, pulse 100, respiration 40. Complains of being very cold. Sits up in bed, and can move himself from side to to side. Was asked if he had taken opiates; replied quickly, "No." Said he had suffered pain the night before, and had taken "a little bromide." "Anything else?" "Yes, some chloric ether." Seemed to have excruciating pain in stomach, and could answer no more questions. He remained in this condition about an hour, when his pulse and respiration began growing less and less perceptible, and at 7 p. m., sixteen hours from the time he was first seen, he expired quietly, without a struggle. No post-mortem.

Remarks by the Attending Physician and the Author of the Paper.

A satisfactory diagnosis of Dr. A.'s case was not made. Any difficulty that might be caused by the use of alcoholics or syphilis may be thrown out. His habits were of the best. There was no atheromatous condition of the arteries. He never had rheumatism, and there were no symptoms of heart difficulty other than irregularity and slowness of the pulse when first seen. His previous health was good; an occasional attack of diarrhœa in the spring for several years past was the only sickness that ever troubled him. His lungs were examined early in the attack, and although there was absence of the respiratory murmur on the right side, and a metallic tinkling—which soon disappeared—on the left, nothing serious enough to cause sudden death was found. We are forced to confess that the complexness of symptoms here present puzzled us, and though it may have been cerebellar hemorrhage, in which, as is well known, frequent vomiting occurs, still, in the light of the following from *Da Costa's Diagnosis*, we are inclined toward the diagnosis of

death from heart failure caused by chloric ether. The only fact against this view is that Dr. A.'s heart acted slowly and feebly at first, though afterwards it became accelerated. "Poisoning by drinking chloroform gives rise to many of the symptoms of apoplexy; it is discerned by the odor of the breath, by the quick and tumultuous action of the heart, which accompanies the stertorous breathing; by the relaxation of the limbs, by the death-like aspect of the face, by the widely-dilated pupils, and by the complete general anæsthesia"—a point not observed in the case under consideration.

Hospital Reports.

A CLINICAL LECTURE DELIVERED AT THE HOSPITAL OF THE UNIVERSITY OF PENNSYLVANIA.

BY WILLIAM GOODELL, M. D.,

Professor of Gynæcology in the University of Pennsylvania.

Reported by WILLIAM H. MORRISON, M. D.

Large Interstitial Fibroid of the Uterus; Removal by Enucleation.

GENTLEMEN: The operation which I intend to perform before you this morning is a serious one, and one which I may not be able to complete at one sitting. It is the removal of a large fibroid tumor from the wall of the womb by enucleation.

Before speaking of the history of this patient, let me refer to the patient whom I showed you last week. You will remember that in passing the sound in a case of uterine fibroid, the instrument went through the thinned-out wall of the womb and entered the peritoneal cavity. The extremity of the sound could be readily felt through the abdominal wall. I told you that this accident had frequently occurred, and that, of all the cases that had been reported, I knew of none in which a fatal result had followed. This woman did not have a bad symptom, and being anxious to return to her home, she, against my wishes, left the hospital yesterday.

At the last clinic, you saw two cases of uterine fibroid, but in both of them the tumor protruded from the cervix. This is an interstitial fibroid, and is much more serious and more difficult to remove.

The history of this patient is, in brief, as follows: She is thirty-six years of age. She has had five children, the youngest being five years old. Since the last confinement, there has been severe hemorrhage at the monthlies. This continued growing worse and worse, uhtil two years ago, when I saw her for the first time. She was then bleeding profusely, and was pale and blanched from the loss of blood. I found it impossible by the use of ergot hypodermically, the employment of chloride of ammonium, and other remedies, to stop the hemorrhage. I therefore had the woman brought to my private hospital. I then made an incision through the cervix, and was able to remove a large portion of the tumor, but could not get it all away. In the course of a couple of weeks the womb had forced the remainder of the mass down so that it was dilating the os. I again etherized her, and removed another portion of the tumor; and if my memory serves me correctly, I operated a third time. At this time I recognized a small fibroid in the posterior wall, but so high up that I could not get at it to remove it. I was, however, in hopes that the subsequent treatment would prevent its development. After the operation, she did exceedingly well, but the small tumor continued to increase in size, and lately hemorrhage has returned. As she is only thirty-six years old, and as the change of life will not be reached until she is at least fifty years of age—for in women who have a uterine tumor, the menopause is postponed for several years—the probability is that if nothing is done, her life will be curtailed by this growth. But this is not the principal reason why I intend to remove this tumor. The woman is in humble circumstances. Her husband is a hard-working man, and she ought to be able to attend to her household duties. As it is, she is practically bed-ridden. She can do no work on account of the severe hemorrhage which occurs each month.

This tumor is in the posterior wall of the womb and has thrown the os high up behind the pubic bone. The cervix is quite large, as a result of the incision made at the previous operation. I propose cutting through the cervix posteriorly into the tumor, passing my finger through the opening and enucleating the tumor as I would remove an orange from its rind; in other words, I shall try to dislodge the tumor from its nest.

There are two or three dangers incident to this operation. One of these is severe hemorrhage. It may be sufficient to prevent the completion of the operation. A second danger is the liability to septicæmia which results from the suppurative inflammation and offensive discharge which must take place in the large wound left by the removal of this tumor. A third danger is that we may accidentally make an opening into the rectum or abdominal cavity. If I fail in removing the tumor, I shall separate as much as I can, make a large incision through its capsule, and give ergot in order that the womb may force the growth through the opening. It is astonishing how large a tumor may be forced through a small opening. It will insinuate itself as does the bag of waters during labor, and gradually dilate the opening until it is large enough to permit the escape of the mass.

The os can hardly be felt, but as I know its position, I pass the sound into it without directing it with my finger. The womb measures five and one-half inches. That shows that we have to deal with a tumor of some size. To cut into the capsule composed of such erectile tissue as the womb is no light matter, and may be followed by considerable hemorrhage, In order to avoid the bleeding as much as possible, I use Adam's subcutaneous saw, which, as you know, is employed to make subcutaneous sections of bone. A saw makes a jagged, bruised wound, and does not cause as much bleeding as a knife.

The history of this and similar cases has led

me to believe that the future operation for many of these tumors will be that of oöphorectomy, *i. e.*, removal of the ovaries instead of enucleation. This woman has been subjected to three or four operations. These fibroid tumors are liable to be multiple; and while I may remove one, a second, which is left, may continue to increase in size, and subsequently require operation. Last Sunday I operated in this building, removing the ovaries in a case of uterine tumor, in which the tumor was so fixed in the walls of the womb that it was impossible to remove it. In order to reach the ovaries, it was necessary to lift the tumor through the abdominal incision.

I now make an opening through the posterior part of the capsule, and try to separate the tumor with my fingers. Remember that I am not in the uterine cavity. I am entirely outside of it. The capsule does not peel off as readily as I had expected. It is possible that the previous operations may have caused inflammation and adhesions of the tumor to its capsule. This adheres so tightly that I shall not be able to remove the mass entire, as I should like to do. It is going to come away in pieces. If possible, the whole tumor should be removed at one sitting. As you see, I have here a number of instruments with which to make traction: volsella forceps, large polypus forceps, and obstetric crotchets. While with the volsella I make traction, I try to separate the adhesions with this lever, looking something like a vectis, and which was devised many years ago to facilitate the removal of the ball pessary. It is a useful instrument for separating the tumor from its capsule. Here is another old instrument devised to keep the vagina down when using Sims' speculum. This I also employ to break the adhesions. The tumor is now beginning to appear. Occasionally I use Thomas's serrated spoon, which is a useful instrument in the removal of these tumors. In separating the tumor, I work towards the womb, but it is always with the fear that I may make an opening into some important cavity.

Here is the first piece that has broken off. The tumor is so tightly attached to the fundus of the womb, where the adhesions cannot be reached that, when traction is made, the tissue gives way. I now apply the crotchet, and although I am employing more force than I ordinarily do in labor, it has but little effect on this mass. Here are a number of little fibroid tumors varying from one fourth of an inch to one inch in diameter, which have been removed during the operation. These have nothing to do with the large tumor, but they constitute one of the objections to this operation; for the small tumors which are left behind may develop into large tumors. Here are more pieces, as large as hen's eggs, which have broken off.

While working, let me say a few words in regard to these tumors. There are three kinds of fibroid tumors of the womb, but it is rare that you find one typical of either class. They follow in the general law of growing in the direction of least resistance. If one forms in the connective tissue, beneath the mucous membrane, it grows towards the uterine cavity, and becomes a submucous fibroid. I believe that in the great majority of cases, fibroid polypi start as sub-mucous fibroid tumors, developing under the endometrium, and are gradually pushed forwards by the peristaltic action of the uterus. A second variety begins in the centre of the wall of the womb; it then develops in both directions towards the uterine and towards the peritoneal cavity, and constitutes a mural or interstitial fibroid. It is to this variety that the present tumor belongs. We have still another variety, which occurs directly under the peritoneum, and grows towards the abdominal cavity. This is the sub-peritoneal fibroid, and is often pedunculated. The principal symptom complained of by those who have fibroid tumors is bleeding. Sometimes pain will be the great symptom, but bleeding is *the* symptom.

The drug which is the remedy *par excellence* for fibroid tumors, is ergot in large doses. This, combined with the chloride of ammonium (the best treatment), is an effecient remedy for these cases. I have seen under its use, fibroid tumors not wholly disappear, but grow so small that, in order to be found, they had to be searched for. Subcutaneous injection of ergotine is a good method for the administration of this drug. This was tried in the present patient, but without benefit. If this treatment does no good, it is sometimes difficult to decide what is the best plan to pursue: whether to allow the woman to go until the change of life, or whether to operate. In this case the woman lost so much blood, that she would have died before the menopause would have been reached. The question then arises, can the tumor be removed by enucleation? Sometimes it can. If the os is sufficiently dilated, an incision may be made into the tumor, and if possible the tumor removed. If the entire mass cannot be taken away, separate as much as possible, and the remainder will gradually be forced through the incision. There is, however, in such cases, increased danger of septicæmia.

I have now removed the entire tumor, which, if it were in one mass, would probably measure four inches in diameter, and weigh about two pounds. The opening, which at first was very large, has now contracted and barely admits of the introduction of two fingers. You see how difficult an operation is enucleation; how difficult it is to reach the points of attachment high up; and you can understand that it is not a favorite operation. There are few who like to undertake it.

I shall now wash out the vagina with carbolized water, and then inject vinegar into the cavity to control the bleeding. Gentlemen, do not use Monsel's solution unless you are driven to it. It is a dirty, offensive remedy, and makes plaster-like clots which do not readily break down, and when they do, cause an offensive discharge, increasing the danger of septicæmia. As the patient will remain in the hospital under constant supervision, I shall not pack this cavity. I shall give ergot to contract the womb, and quinine to lessen the liability to septic poisoning.

NEW YORK HOSPITAL.

CLINIC OF PROF. WILLIAM H. DRAPER.

Reported by W. H. SEELYE, A. M., M. D.

Hypertrophied Liver.

The patient, M. M., is a young woman, twenty-one years of age, single, and a native of the

United States. She has been on the town for the last five years, and has lived a very dissipated life, sometimes drinking as much as a pint of whisky a day. She has never had a miscarriage, and has had no children. Menstruation has been absent for the last four or five months. She says that at one time she had a chancre, attended by a swelling of the inguinal glands, which did not suppurate. She has had no syphilitic sore throat. Last summer rose-colored spots appeared upon her back and shoulders, and similar eruptions have continued to come and go in successive crops since then. There have been no ulcers or loss of tissue anywhere. There are a few scattered spots visible at present. Four months ago she began to be troubled with dyspeptic symptoms, loss of appetite, nausea, and vomiting, and then with a feeling of faintness, and a loss of muscular strength. Three months ago she began to have violent fits of coughing, and would sometimes discharge small quantities of blood with the expectoration. Then she became troubled with dyspnœa, and a pain in the epigastric region, and her feet were sometimes slightly swollen. The gastric symptoms and loss of strength steadily increased. She was not troubled with piles. Two months ago she noticed that the upper portion of her abdomen was becoming enlarged. Recently epistaxis and constipation have been added to her symptoms. On her admission to the hospital, December 3d, her temperature was 101.2°. She said that she had taken no food but whisky for several days previous.

Gentlemen: this young woman, whose history you have heard, now comes to us in a very feeble condition, but she does not complain especially of this weakness or of pain; but she does complain of having ocular delusions, though there is no delirium present, or at least but a very little. The objects which she sees are very real to her, and a source of great suffering, She sees all those curious shapes and distressing forms which are said to haunt those people who are suffering from mania-a-potu; but in her there is no mania present, but only ocular delusions. And these may depend upon her extreme anæmia, as much as upon the large amounts of alcohol to which she has been accustomed.

I show you her case because she presents the interesting feature of a very much enlarged liver. And on inspecting her abdomen, you can see the enlarged veins near the surface, which are apt to be present in all cases of obstruction to the portal circulation. When she first came in, her whole belly was excessively tender to the touch, but this was especially marked over the surface of the liver. Yesterday it was less sensitive, and to-day it is still less tender. Upon gentle percussion I find that the area of liver dullness begins in the fifth intercostal space, and extends downwards to about four inches below the free border of the ribs, and to the left of the umbilicus about two and a half inches. These limits are a little less than those made out by the doctor at the time of her admission, and which you see marked off on her abdomen. She is so tender that I dare not use force enough in percussing her to elicit an audible tone. But in percussing lightly over a solid organ, even though no sound is elicited, there is a sensation of a want of resonance transmitted to the hand, which is just as valuable as though the sound were heard by the ear. So here I can feel that I am percussing over a solid organ, though I cannot hear anything. I find, also, that the spleen is enlarged, its lower border extending below the free border of the ribs, and its upper border rising to about the usual height, in the eighth intercostal space. I find no evidence of fluid in the belly either by percussion or palpation.

We conclude, therefore, that she has an enlarged liver and an enlarged spleen. And now the question arises as to what is the cause of this. One of the possible causes is congestion of the liver. For this organ will sometimes increase in size a third or a half as a result of a congestion brought on by the excessive use of alcohol for a short period. However, this is but a transient condition, while the enlargement which we have here seems not to be transient, judging from the history which she gives. So we cannot account for it by congestion alone. But may she not possibly have some kind of degeneration of the organ? Considering her dissipated course of life, and the specific history which she gives, there are two kinds of degeneration, either of which we ought to expect to occur. For fatty degeneration of the liver is often a result of excessive indulgence in alcohol, while waxy degeneration frequently results from constitutional syphilis, and indeed syphilis is one of the most important causes of this variety of degeneration. It is not an easy matter to determine which of these two varieties we have here. But it may be of service to remember that fatty degeneration is usually a special degeneration of this organ alone, while waxy degeneration is a more generalized and universal disease, and it may effect any of the parenchymatous organs, but notably the liver, kidneys, and spleen, and the walls of the vessels anywhere in the body, and thus be as general as sclerosis usually is. We can exclude a tumor of the liver here, because of the regular outline and the uniform enlargement of the organ in all directions. Therefore, because we find that the liver is not the only organ involved here, it is more probable that the enlargement of this organ is due to waxy degeneration. But I would consider that there is also congestion here as a complication, which is an additional cause of the hepatic enlargement. But that it is due simply to congestion is not probable, because it has existed so long a time; while it is not at all improbable that there is an element of congestion in addition to the other causes of enlargement. For there is great tenderness over the liver, and this is one of the prominent signs of congestion. And this supposition is further confirmed by the effect which medicine has produced upon her. For I think that since she came in the liver has considerably diminished in size, as a result of the administration of a purgative and other medicines which tend to reduce congestion. But this is I believe only one of the elements of the enlargement of the liver, which is mainly due to a degeneration, either fatty or waxy, of the organ. And in favor of its being a waxy degeneration is the fact that we have already found, that the spleen is also enlarged. And now we can arrive at some evidence in regard to the condition of the kidneys by examining the urine. The doctor has made this examination,

and he finds that the urine contains albumen and casts, and it is of low specific gravity, and it varies in quantity from day to day. The three important indications here are the presence of albumen, the low specific gravity, and the variation in quantity. In waxy degeneration of the kidneys the urine is regularly below the standard, and it varies in quantity, and it is sometimes considerably, or at least moderately, albuminous. So here we have a waxy degeneration of the kidneys, in all probability, in addition to degenerated spleen. And I therefore think it probable that in this case we have a waxy liver to deal with. Still we cannot be absolutely certain about it; and in any case the diagnosis is not of very great importance here, for it will make little difference as to the final result.

When this patient first came in, a calomel purge was administered in order to reduce the congestive element, and to prepare the digestive organs for assimilating food. To-day she has not taken any food but water, and has had epistaxis twice. You observe here what you will see in all advanced cases of degeneration of the liver, namely, a readiness to bleed from the mucous surfaces, and an extreme anæmia, and a pallor which is unmistakable. If I were to examine the retina of the eye, I would probably find the anæmia well marked there. Her pupils are very large, and so far as her ocular hallucinations are concerned, she is in very much the same condition as is a person who is suffering from poisoning by belladonna. For sometimes in belladonna poisoning there are hallucinations of sight, without any true delirium. Up to this time she has been perfectly conscious and intelligent, and there has been no mania, though she is now perhaps beginning to be a little delirious at times.

There is not much to be said about treatment in such a case.

Medical Societies.

COLLEGE OF PHYSICIANS OF PHILADELPHIA.

Enteric Paraplegia.

BY ROBERTS BARTHOLOW, M. D., LL. D.,

Professor of Materia Medica and General Therapeutics in the Jefferson Medical College, Philadelphia.

[Read November 7, 1883.]

By the term enteric paraplegia, I intend to express the conception of a spinal paralysis, produced by an intestinal disorder. It is a truly reflex paralysis. The fact of the existence of such a malady is denied by many, and indeed most of the reported examples will not bear careful inspection; for it will be found, as I shall show, that they are really cases of ascending neuritis. Eliminating such from the examples of true reflex paraplegia to be found recorded, I intend to place the latter in a special group composed of cases presenting the symptoms of an enteric disease, during the course of which a motor and sensory paraplegia manifests itself, and pursues a course obviously dependent on the original lesions. The cases I have lately seen occurred in men over sixty years of age, and each one presented a morbid complexus so distinctive and uniform as to entitle it to be regarded a substantive affection—a pathological entity. Although such cases have been described as examples of reflex paralysis, they have not been adequately differentiated from others similarly classified, but of different nature.

Before attempting the task of analysis and differentiation, I must give a brief outline of three cases, the most recent which have come under my observation.

Case 1. Mr. R., æt. 64, merchant and banker, of very vigorous and robust frame, rather spare and bony in outline, but capable of great endurance, called on me a year ago, amongst other physicians of this city, for relief of an obstinate bowel affection. His story was this: For a year or more previously he had suffered with intestinal indigestion, colic pains, flatulence, and considerable depression of spirits. Soon after these symptoms were experienced, he began to have pain in the back, with more or less band-like constriction of the abdomen, a feeling of numbness in the feet and legs, a strong sense of fatigue in the inferior extremities, followed by weakness and awkwardness of movements in walking, obstinate constipation, and slowness in the emission of urine. For the relief of these alarming symptoms he consulted an eminent practitioner of this city, who diagnosticated myelitis and advised cups, the moxa, and a pill which probably contained ergot. Without using any of the local applications, Mr. R. took the pills, which had a favorable effect in relieving the flatulence and constipation; but presently dysenteric attacks supervened, and then a remarkable change ensued in the spinal symptoms. Up to this period, the paraplegia had steadily increased, and walking had become exceedingly difficult, but the change in the condition of the intestine effected a revolution in the state of the spinal functions, and in the course of a few weeks, all the paralytic symptoms had disappeared. Still troubled with intestinal indigestion, Mr. R. finally consulted me amongst others, when I learned the details of the case just given. Very recently I have heard that Mr. R. continues free from the spinal symptoms, and has in the main got rid of his intestinal disorder.

Case 2. Mr. P., a tall, thin, but hardy Quaker farmer, æt. 72. I saw the patient at his home near Delta, York county, this State, in consultation with Dr. Hickman, a very intelligent practitioner living there. I learned that the patient some ten years before had experienced a similar attack, but had recovered rather suddenly under the influence of some remedies which were then prescribed. For some years, he remained comparatively free from disorders of digestion. The present attack came on during the past winter; at first there appeared a very considerable disturbance of digestion—acidity, pyrosis, flatulence, and colic pains. The distress was increased by taking food, and apparently attained its maximum when the alimentary materials entered the intestines. In fact the symptoms of intestinal indigestion were the most pronounced throughout, and to these were added obstinate constipation, the stool consisting of balls united by masses of mucus or coated with the same. Very soon after the gastro-intestinal catarrh was established, Mr. P. began

to experience numbness of the feet and legs, and an increasing difficulty of locomotion.

At the time of my visit with Dr. Hickman, the patient was nearly entirely disabled. The history of very severe and continuous digestive troubles was repeated. I will, therefore, to occupy as little time as possible, pass on to the objective examination of the paraplegia.

He could not stand without assistance; there was an extreme degree of ataxia; the muscles were so weak that his utmost efforts could not at all hinder slight movement of extension when the legs were flexed on the thigh; the tactile sense was so lowered that the points of the æsthesiometer could not be felt at all; the muscles responded feebly to an induction current; the emission of urine was very slow, and there was much dribbling afterward, and the bowels were extremely sluggish. There was a feeble knee jerk.

With attention directed entirely to the digestive trouble, beginning with an exclusive milk diet, in two weeks a marked improvement was manifest in all the symptoms, the paraplegia disappearing. In a letter recently received from Dr. Hickman, I learn, that after a period of very great improvement, Mr. P. began to decline in strength, owing to failure of the functions concerned in nutrition.

Case 3. Mr. McK., of Clearfield county, about sixty years of age, has had for many years frequent attacks of sick-headache. Within the past year, pronounced symptoms of intestinal indigestion, pain of a colicky character, flatulence, and irregular action of the bowels, etc., have come on; but the symptom which has caused the greatest apprehension, and on account of which, more especially, he has called on me, is an increasing numbness with some diminution of power of the inferior extremities. The tactile, pain and temperature senses, are not abolished, only slightly impaired, and the tendon reflex is unaffected. A feeling of fatigue, of weight and heaviness is felt in the legs, but locomotion is not as yet much affected. I wait further developments in the symptoms referable to the nervous system, but meanwhile treatment is directed to the gastro-intestinal disorder.

Cases similar to those which I have thus briefly outlined, have been recorded by various observers. An admirable example, and one of the first of its kind, was narrated by that eminent clinician, Graves, of Dublin, (*Clinical Medicine*, edition by Neligan, vol. i. p. 558). In this case extreme gastric disturbance, with less important intestinal, came on in distinct paroxysms, varying in duration from several days to two or three weeks, and accompanied by complete motor paraplegia. For a time, entire recovery took place, the paralysis disappearing with the cessation of the other symptoms. Finally, the attacks grew so frequent as to be almost continuous, and death ensued from exhaustion. The minutest examination failed to disclose a lesion in any organ of the body. With the advance in our means of investigating morbid states, such cases of presumed functional disease of the nervous system are becoming more and more rare. That there is a condition of reflex paraplegia, due to anæmia of the cord, is a postulate I expect to maintain. That there is, however, a so-called reflex paraplegia connected with diseases of the gastro-intestinal and genito-urinary tracts, which is not truly reflex, is another postulate that I believe to be susceptible of demonstration.

There was a period, in England more especially, when the notion of reflex paraplegia secondary to intestinal, renal, and genital disease, was widely entertained. The cases first reported by Stanley (*Medico-Chirurgical Transactions*, vol. xviii. p. 260), Brodie (*Lectures on Urinary Organs*, p. 115), Stokes (*Practice of Medicine, Treatment of Nervous Diseases*), Graves, and others, were supplemented by the striking narratives of Gull (*Guy's Hospital Reports*, various papers). Then Brown-Séquard (*Lectures on Paralysis, etc.*, 1861) gave a scientific explanation of the mechanism, referring the paralysis to vaso-motor action. It must be admitted, nevertheless, that the doctrine of a reflex paralysis has not maintained the position it once had. In no modern work is the subject treated with the extent and gravity befitting an important disease.

The two postulates I purpose to sustain, are:

1. That there is a reflex paraplegia due to a functional disturbance of the intestine—enteric paraplegia.

2. That there is a paraplegia having its initial seat in the end-organs of the nerves distributed to the mucous membrane, thence ascending to the cord by a progressive neuritis.

As respects the first postulate, the cases I have narrated, and many others on record, demonstrate a causal connection between the enteric disorder, and the spinal. That the paraplegia is functional is proved by its prompt cessation when the cause is removed. One of the means of determining whether a given paraplegia is due to a myelitis, or to mere anæmia—that is, functional—is the subcutaneous injection of strychnine. At a late meeting of the American Neurological Association, Dr. Jewell, of Chicago, recounted his experiences with considerable doses of strychnine, in cases of paraplegia, which improved so remarkably, that they must have belonged to the merely functional group. It is in a high degree probable, that cases of merely reflex paraplegia—of enteric paraplegia—especially as they occur in aged subjects, are relatively frequent, and happen from a degree of intestinal disturbance, that seems a mere accident of the morbid complexus.

What is the mechanism? We are helped in our consideration of this question by physiological data. Kussmaul and Tenner (quoted by Erb), have shown that sufficient loss of blood will cause paraplegia. Tying the abdominal aorta, and its obstruction by disease—of which Gull (*Guy's Hospital Reports*, 1858, p. 311) has given a striking example—embolic blocking of the spinal vessels, as Panum (*Virchow's Archiv.*, Band xxv.) has experimentally demonstrated, and large uterine hemorrhage as Moutard-Martin (*L' Union Médicale*, 1852,) has shown, have alike stopped the spinal cord functioning. In other words, an insufficient blood supply—an anæmia—is a cause of paraplegia. Brown-Séquard in his Lectures, published in 1861, maintained the thesis that a strong contraction of the vessels of the cord induced by reflex stimulation is the essential condition in reflex paraplegia. We should not lose sight, in this connection, of the degree of stimulation necessary. A moderate degree of intestinal irritation suffices—for the law of reflex contraction of the vaso-

motor fibres may be formulated thus: irritation of the end organs of the sensory nerves, not too violent and long-continued, stimulates the vaso-motor centre in the medulla, and causes a general contraction of the arterioles; but excessive and protracted irritation depresses the vaso motor centre and relaxes the vessels. It seems probable that an ordinary intestinal indigestion and the stretching of the nerve fibres produced by retained gas, is a degree of irritation sufficient to produce the supposed effect. To the further elucidation of the mechanism of enteric paraplegia, it is necessary to recall the fact that the blood pressure in the vessels of the intra-abdominal organs rises and falls within considerable limits in quite an independent manner, controlled, doubtless by the same ganglia that regulate the calibre of the intra-spinal blood-vessels.

The circulation within the spinal canal is peculiar, in that the veins bear such a disproportionate volume to the arteries, and that the whole vascular supply is in a certain sense a diverticulum. Atheroma of the vessels will contribute to the result of reflex irritation, and hence it is that paraplegia has resulted from endarteritis of the spinal vessels.

The second postulate is that the paraplegia which succeeds to certain cases of enteric, renal, or genital disease, is due to an ascending neuritis. Chronic dysentery, pyelitis, and vesical catarrh, are affections during the course of which the spinal cord has become diseased. Lesions of continuity involving the terminal nerves in structural changes, are necessary to the production of this effect. The part which ascending neuritis may play in causing anatomical alterations of the spinal cord, is exhaustively shown by Friedreich in his monumental work on progressive muscular atrophy (*Ueber progressive Muskelatrophie, über wahre und falsche Muskelhypertrophie*, Berlin, 1873, Hirschwald). Whether we accept his conclusions or deny them, we cannot withhold the full measure of admiration for his labors. Starting with the theory of an intra-muscular neuritis, Friedreich holds that by an extension of this affection upwards, the cord is ultimately reached, and the changes belonging to progressive muscular atrophy are wrought. The intra-muscular neuritis admitted, the rest may easily follow. Under the term "Chronic Ascending Neuritis," Dumenil has described the changes in injured nerves which, caused by trauma, proceed from the point of injury up to and involve the cord. Vulpian has especially demonstrated the modifications produced in the spinal cord, by the section of a principal nerve in a member, usually the sciatic (*Archives de Physiologie Normale et Pathologique*, No. 3, 1868, p. 443). The nerves of a limb amputated as Dickinson has especially shown, undergo degenerative atrophy, and that part of the spinal cord in anatomical connection therewith, also atrophies. Many other observations might be quoted, but these will suffice to show how changes in the cord follow injuries to peripheral nerves.

In paraplegia secondary to ulceration of the mucous membrane, we can readily, I think, conceive of a lesion of the peripheral nerves, and an ascending neuritis to which the succeeding changes are due. It follows that such cases require a very different prognosis from those of simple reflex paralysis. The course and termination of the latter are effected by the causal lesions, whilst the former pursue a steadily unfavorable direction from the beginning of the spinal symptoms. The differentiation of reflex from secondary paraplegia is made by attention to the following points:

Reflex paraplegia is sudden in its onset, or, at least, develops quickly; secondary paraplegia is gradual in its evolution; the former is soon complete in all its points of symptomatology; the latter attacks one spinal function at a time. Reflex paraplegia follows the fortunes of the producing malady; secondary paraplegia pursues an independent course, and when the alterations begin in the spinal elements, they proceed in their own way, just as after amputation of a limb, the changes in the cord go on in the associated nerve fibres, or as in Landry's ascending paralysis, the lesions proceed by contiguity of tissue. Reflex paraplegia, of and by itself, never proves fatal, nor does it inflict permanent damage; secondary paraplegia may be the cause of death, and if not fatal, effects lasting mischief.

To this view of reflex paraplegia it may be objected, that extreme variations in the vascular supply must ultimately lead to structural changes. This is certainly possible, but the spinal, like the cerebral circulation, is arranged to permit considerable variations in the amount of blood.

It remains to explain, if an explanation be possible, why intestinal or renal lesions may in one case produce a merely reflex disturbance, and in another, set up an ascending neuritis. There are, probably, two reasons: 1. The depth and extent of the peripheric lesions; 2. An inherent susceptibility to degenerative changes in the nervous elements. The first to me has profound significance, and I have already alluded to it. A degree of peripheric irritation not too great, will merely stimulate the vaso-motor centres, and cause anæmia of the cord by tonic contraction of its vessels, but when the lesions of the mucous membrane are of a destructive kind, depression of the trophic centres, as well as of the vaso-motor, ensues. That there is a neuropathic type of constitution, in which the nerve tissues are peculiarly prone to take on morbid changes, is an indisputable fact. When the two influences coincide, the result is not doubtful.

I must, then, conclude that there is a malady, which may properly be entitled *Enteric Paraplegia*.

An Old Definition of the Meaning of "Doctor."

Dr. A. Creswell Rich thus writes in the *Brit. Med. Jour.*, December 1, 1883:

The following epigram appears at the end of the preface to *The Practice of Physick*, "by Lazarus Riverius. From my study at Montpelier, July 1st, 1653. Printed by Peter Cole, Leadenhall, June 2nd, 1655." It is signed, "W. R." I am unable to find out for whom these initials stand.

"*Doctors*, or *Teachers*, they of *Physick* are
(Whether by Pen they do it, or in Chair,
With lively Voyce), that teach the way to know
Man's Nature, *Health*, and *Sickness*, and do show
Diseases, *Cause*, and *Cure*. But they who spend
Their Life in *Visits*, and whose Labors end
In taking *Fees*, and giving *Paper-scrowls*,
FACTORS of *Physick* are; and none but *Owls*
Do count such *Doctors*, that *no Latin* know,
From whence that *Name* did to our Language flow.
W. R., Doctor, and Factor of Physick."

EDITORIAL DEPARTMENT.

PERISCOPE.

Good Remedies out of Fashion.

In an address on this subject, delivered at the annual meeting of the Metropolitan Counties Branch of the British Medical Association, by the President, Dr. C. J. Hare, late Physician to University College Hospital, the lecturer made some interesting observations on emetics and bleeding.

"It is not long ago that, in a very urgent case of bronchitis, I advised the administration of an emetic; when the gentleman whom I had been called to meet in consultation said, 'Why, I never gave an emetic to an adult in my life.' In former times, it was not unusual, on the contrary, to commence the treatment of many diseases with the administration of a dose to procure vomiting; and although the remedy might then be given sometimes indiscriminately and according to routine, only those who have seen the effects of emetics, properly and judiciously given, can conceive the beneficial effects they sometimes produce. In the early stage of an attack of croup, it was by no means unusual to give an emetic of tartarized antimony or of ipecacuanha; and it is in accordance with the recorded experience of some of the best authorities and most practical men, and quite consonant with my own experience too, that symptoms which presented the most certain augury of a severe attack were by these means cut short, the hoarse voice resumed its natural character, and the feverish symptoms were in a few hours relieved. I know quite well that a great fear is entertained by some as to the depressing effects of emetics; but the fear is theoretical, and not practical, and those who have had most experience in the administration of them best know how groundless the fear is. In diphtheria, too, I have seen the false membranes which are out of the reach of local remedies, and which the patients cough and cough in vain, and utterly exhaust themselves to get quit of, readily brought up by the action of vomiting, to the immense relief of the sufferer.

"In suffocative bronchitis, the effect of emetics is sometimes magical, and by their administration in such cases not only is immense relief given, but I verily believe—I am certain—that lives are saved. You are called to a patient who has been ill a few days, with increasing dyspnœa; she is sitting up in bed (I draw from nature), for to lie down is impossible; she is restless, and tossing about; the lips, and indeed the whole face, blue; the eyes watery and staring; the pulse quick and small; the cough constant; the expectoration semi-transparent and tenacious; over every square inch of the chest, front and back, from apex to base, you find abundance of rhonchi; moist, sonorous and sibilant ones in the upper part of the lungs, and muco-crepitant or mucous *râles* towards the bases. Ammonia and stimulants, right and good in their way, perhaps, in such a case are too slow in their action; the patient is, in fact, more or less slowly, more or less rapidly suffocating. An emetic of twenty-two grains of ipecacuanha in an ounce of water is given; in ten or fifteen minutes the patient vomits and brings up a huge quantity of that tenacious mucus, and the whole aspect of the case is altered; the distressed countenance is relieved; the breathing is at once quieter; and the patient is able for the first time for the past twenty-four hours to lie moderately low in bed, and to get some sweet refreshing sleep. The patient is, in fact, rescued from the extremest peril, and in this case, and in many similar ones too, I believe, from otherwise most certain death. Of course, in such cases the emetic is not given for its effect on the stomach, but for its collateral effect in mechanically clearing out the enormous amount of secretion which accumulates in the bronchial tubes, and which the patient is otherwise quite incapable of getting quit of; and thus the half-choking, almost asphyxiated, condition is changed for one of comparative comfort, and time is gained for the action of other appropriate remedies. No doubt the secretion may, and often will, accumulate again; and I have not hesitated again in bad cases to repeat the same good remedy; but it is a fact, and a very positive one, too, that, quite contrary to what those who have had no experience in the plan suppose, the system rallies instead of being more depressed under the action of the remedy.

"There is a class of cases in which the right heart is engorged with blood, and in which the only hope of rescuing the patient from death is by bleeding. A man of middle age (I again draw from nature) has considerable chronic bronchitis, with some congestion of the lungs, and, like many other unwise persons, he goes to a southern watering place instead of remaining in his room and in an uniform temperature. Becoming worse, he determines to return home, and travels on a cold spring day; his dyspnœa is so much worse on the journey, that his friend and the fellow-passengers doubt whether he will arrive home alive; and when his carriage meets him, it is with the greatest difficulty he is conveyed to his house, and got into his drawing-room. You are at once sent for, the message being that the patient is dying, and when you arrive you find that that is the fact. He is sitting in a chair (to lie down is impossible for him), his face is blue and swollen, his lips purple, the eyes suffused and staring, his heavy gasping breathing you have only too distinctly heard and recognized as you ascended the stairs, and when you see him you find his chest heaving, and each short gasping inspiration followed by a long wheezing and moaning expiration; his lungs are full of moist sonorous, and mucous and submucous rhonchi, and scarcely a trace of vesicular respiration is to be heard, and he is pulseless. He looks to you beseechingly, and gasps out, in scarcely articulate words, that he is dying. This is but too true. Now, the treatment for such a condition at the present day is 'to pour stimulants' (though the patient can scarcely swallow). Bran-

dy and water are given, and ammonia, and perhaps ether; then, if the patient lives long enough to have them made, mustard poultices are applied to the chest, and to the calves, and to the feet, and the patient is fanned, and the patient dies. Something has been done, but that which true pathology —and, indeed, common sense, unshackled by prejudice, custom, and fashion—would dictate, has been left undone. Appearances have been saved but not the patient's life.

"The fact is, that here the danger lay in the right side of the heart being gorged with blood, so that it was impossible for its stretched and distended walls to contract and to propel forwards the thick and blackened blood. Oh, as you value your patient's life, as you value the blessed consciousness of being a minister who has done everything possible for his welfare, let me beg of you not to be contented with the futile treatment of to-day; relieve that poor, oppressed, distended heart, and all may be well! Open one of those veins which are, with every systole of the heart, tending to carry more and more blood to this already distended right ventricle, and all may yet be well with your patient. Sometimes this bloodletting, in extreme case, is no easy matter; it may be necessary, before you can effectually open the vein, to place the patient's arm in warm water, so as sufficiently to distend the vein; and even when the ligature has been efficiently applied, and the vein well opened, you may have to press and squeeze and rub upwards the arm before a drop of the thick and tarry blood will flow. But when it *does* flow at length freely, oh, what a marvellous change may you see take place!—the breathing becomes quieter, deeper, and less noisy, the haggard face resumes the appearance of tranquility, the blueness of the skin is replaced by a more natural tint, the pulse becomes more and more distinct, and, in a word, the choked up heart is set free. This is no fancy picture. Every word is simple truth, and I appeal for confirmation to the memory of every senior member present who recollects the experience of his earlier days, and who can also probably tell you that the after-progress of such cases was sometimes almost miraculously rapid, so that in a few days even the patients might become convalescent."

The Chief Theories of the Nature of Diabetes Mellitus.

The *New York Medical Journal*, July 28, 1883, contains an article on this subject by Dr. F. Eklund, of Stockholm, Sweden, which concludes with the following appendix:

1. The essential cause of diabetes is, according to Tunke,[a] the exceeding accumulation of grape-sugar in the blood; this accumulation, itself, again may arise in different manners. 1. It may be produced directly by injection of solutions of sugar into the blood; 2. It arises spontaneously in men during, for the present, unknown pathological conditions; 3. It appears as a consequence of some lesions of the nervous system; and 4. As the effect of the influence of some poisons on the nervous system. Lesion of the medulla oblongata at a definite spot in the floor of the fourth ventricle (at the apex of the calamus scriptorius), section of the spinal marrow at different heights, poisoning with curare, at the same time sustaining the blood circulation by means of artificial respiration, yet only with incomplete inflation of the lungs, effect diabetes (justly and properly[b] called a transitory mellituria). It is proved that in all these cases the sugar which is accumulated in the blood is liver-sugar. But from this it follows that the forms of diabetes mentioned depend either (1) on an increased metamorphosis of the already present liver-glycogen into sugar, or (2) on a lowering of the processes which normally annihilate sugar, either in the blood or in the textures, so that their extinction must, of course, produce an accumulation of the said matter in the fluids of the body.

2. According to Claude Bernard,[c] the cause of diabetes is an increase sometimes of the whole function of the liver, sometimes only of the change of the glycogen present into sugar in consequence of an active congestion of the liver, depending on a paralysis of its vaso-motor nerves.

3. Schiff[d] argues that a hyperæmia produced by paralysis of the vaso-motor nerves in any considerable vascular area causes the formation of a ferment which is not to be found in the normal blood, but which within the liver changes the glycogen into sugar.

4. Pettenkofer and Veit[e] declare the cause of diabetes to be, that with a normal synthesis of glycogen in the liver the decomposition of the sugar produced is retarded or suppressed by impeded oxidation in the blood, but neither is the fundamental fact, the decomposition of the sugar, to be admitted, nor is the truth of the different hypotheses which are suggested to explain the causes of the pretended checking of the oxidation demonstrated.

5. Tscherinow,[f] who regards the liver as a sugar-destroying organ whose physiological object is the metamorphosis of sugar into glycogen, maintains the view that in diabetes the energy of the liver in the processes of oxidation (more properly, dehydratation[g]) is impaired.

6. According to Pavy,[h] the cause of diabetes in men is a paralytic dilatation of the vessels of the liver.

7. Trumet de Fontarce[i] thinks that the genuine diabetes is of paralytic origin, depending on dilatation and hyperæmia of the vessels of the liver in consequence of their privation of the contractile stimulation of the vaso-motor nerves. It is only a transitory glycosuria, certainly a pregnant symptom of diabetes mellitus, but never the real constitutional diabetes, that has been produced in an experimental way.

8. Senator[j] suggests that diabetes, may arise: 1. From an abnormally augmented quantity of

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[a] Otto Tunke's "Lehrbuch der Physiologie," Leipzig, 1876, 1 Theil, S. 153.
[b] Eklund.
[c] Otto Tunke, *op. cit.*, S. 154.
[d] Ibid.
[e] Ibid.
[f] Ibid.
[g] Eklund.
[h] Senator, "Diabetes Mellitus," in "Handbuch der speciellen Pathologie und Therapie," von Dr. H. v. Ziemssen, xiii. 1, Leipzig, 1879, S. 484.
[i] Trumet de Fontarce, "Pathologie clinique du grand sympathique," Paris, 1880, p. 212.
[j] W. T. Loebisch, "Anleitung zur Harnanalyse," Wien und Leipzig, 1881, S. 273.

sugar in the chyle or in the blood of the vena porta, or in these two together. This excess of sugar depends on an impeded metamorphosis into lactic acid of the sugar in the intestines, or on an accelerated resorption of the sugar. 2. The cause of diabetes is an abnormal acceleration of the circulation in the vena porta, whence generally more of the sugar ingested or derived from starch enters the liver. From this organ it is transported into the circulation, without having been metamorphosed into glycogen, but, moreover, the glycogen formed from sugar or other matters is transformed again more speedily and in more considerable quantities into sugar than it is carried away. 3. The cause is a diminution of the power to decompose the sugar which is introduced into the general circulation.

9. Zimmen[k] directs attention to the fact that hitherto, in interpreting the origin of diabetes, the muscles, where glycogen and sugar are formed, have not been taken into account, and, nevertheless, a muscle in repose, as we know, like the liver, stores hydrates of carbon in the form of glycogen in its tissue; during labor this glycogen is converted into sugar—that is, further decomposed into sarco-lactic acid, and finally into carbonic acid and water. That the muscle during its activity destroys even the sugar circulating in the blood, is most evident from the cures that are effected of many diabetics by means of bodily exercise methodically used.

10. Cantani[l] says that diabetes mellitus is a disease of the nutrition, in which, without an abnormal production of sugar, this is not consumed as fuel in the organism. This resistance that the sugar in diabetes shows against the process of oxidation may proceed from the fact that the ferment which disintegrates the sugar either is totally absent or operates in an abnormal manner on the sugar and metamorphoses it into a combination on which the oxidizing forces of the organism are wholly inoperative. According to Cantani, the blood-sugar, the paraglycose, of diabetics is different from the normal blood-sugar. As the material seat of diabetes, Cantani admits in the first stage the pancreas, even the digestive glandules of the stomach and intestines; it is only indirectly that affections of the central nervous system, by influencing the chylopoiëtic organs, effect diabetes.

The Therapeutic Results of Hypnotism.

The *Boston M. and S. Jour.*, Nov. 29, 1883, tells us that De Giovanni has recently published, in a reprint from the *Gazetta Medica Italiana*, some observations on the above subject which are thus summarized in the *Centralblatt für klinische Medicin*, No. 42, 1883:

Giovanni reported five cases in which he had employed hypnotism for therapeutic purposes. Four of the patients were females, with markedly nervous constitutions, the fifth a young man of eighteen years. In the first case there was a circumscribed painful spot in the lower portion of the dorsal spine persisting after a contracture of the lower extremities that had been cured by massage; in the second an obstinate nervous vomiting; in the third a nervous affection of a very diverse and changeable character, consisting of contractures, neuralgias, anæsthesias, etc., which, according to the opinion of the reporter, did not depend upon hysteria.

In the two first cases Giovanni succeeded in hypnotizing the patients at the first attempt while he caused them to look at the point of his finger held fourteen to fifteen centimetres distant from their eyes, and a little above their level. With the third patient in the first sitting, although it lasted an hour, no sleep occurred, and but little in the second, but in the latter some tremulous movements of the legs took place, without, however, the patient's being conscious of them. In the third sitting she came into an evident hypnotic state. In all three cases complete cure followed after two or four weeks of treatment, whereas they had resisted every other treatment. The sittings took place from one to three times daily. The fourth patient suffered from alopecia areata and a peculiar affection of the skin. Giovanni wished to excise a bit of the skin for microscopical examination, and hynotized the patient with that object. He was able to perform the little operation without the patient's experiencing the least pain. For a similar purpose he hypnotized the fifth patient, who was suffering from an acute, exceedingly painful coxitis, and on whom a bandage was placed during his sleep.

The phenomena observed were in all cases the following: At first, accelerated movements of respiration and movements of swallowing occurred. The pulse, too, became quicker. Then the lids closed, and the eyeballs turned upward; then quiet sleep during which the tendon reflexes were exalted, but the neuro-muscular excitability not enhanced. Complete muscular relaxation and cutaneous anæsthesia followed, yet needle-pricks called forth lively reflex movements. It was noteworthy that after the awakening sharp pain was experienced in the place of the puncture, and circumscribed reddening of the skin appeared as after a flea-bite. The lids were convulsively shut during the sleep. The sense of hearing was the least altered. The four patients conversed during their sleep as if they had been among their own families. After fourteen to fifteen minutes' duration of the sleep awakening occurred spontaneously or after blowing upon the face. Except for a transient feeling of heaviness in the head, the condition of the patients was good after awaking. In the fifth case, at first sleep came on, but no anæsthesia; this became complete after Giovanni had employed a moderate short pressure on the eyelids and the roots of the nose, and had rubbed the skin of the forehead. In like manner could the hypnosis be hastened by a slight rubbing of the eyeball.

Giovanni is of the opinion that in the hypnotic sleep the conduction to the brain is completely severed, while that to the spinal cord is not disturbed, as is indicated by the persistence of the reflex movements. The appearances observed after the needle punctures are explained by extraordinary excitability of the peripheral nerves and of the spinal reflex action, as well as by vaso-motor paralysis at the punctured spot during hypnosis. He calls for further therapeutic researches on the safety and efficacy of hypnotism.

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[k] Loebisch, *op. cit.*, p. 273.
[l] Ibid.

Reviews and Book Notices.

BOOK NOTICES.

Annual Report of the Supervising Surgeon-General of the Marine Hospital for 1883. 1 vol., 8vo., pp. 406. Washington, 1883.

An examination of this volume will serve to convince the most skeptical of the great value of the marine hospital corps, not merely to the classes interested in international commerce, but to the general public as well. Especially is this the case since matters relating to national health have been placed under the supervision of this bureau. It is well equipped with a highly educated professional staff to encounter the threatenings of pestilence, and the theory on which it sets to work is one which does not antagonize other willing allies in the same contest.

The Report is made up of the official statement of the Surgeon-in-chief of the service, numerous statistical tables, a number of selected cases from practice, and an appendix of something over a hundred pages devoted to the outbreaks of yellow fever in Mexico, Texas, and Florida. The last-mentioned contains a history of these epidemics, maps showing districts infected, details of cases, explanations of the sanitary cordons established, and other such facts.

The "selected cases from hospital practice" are typical examples of diseases and injuries, and they are all well worth perusal. The first is a statistical inquiry into the manifestations of syphilis among negroes by Dr. Henry R. Carter. It reaches the interesting conclusion that this disease is decidedly milder in the black than in the white race. In his observations, Dr. Carter found an absolute absence of bone-lesions among negroes, though he cautions the reader on generalizing from this result. The surgical material in the Report is fairly full, and some of the more striking cases are accompanied by illustrations.

Transactions of the American Gynecological Society, volume vii., for the year 1882. Cloth, 8vo., pp. 485. H. C. Lea's Son & Co., 1883.

The meeting, of which this is the record, was held at Boston in September, 1882. To wait until the beginning of 1884 to print the papers and discussions is following something too literally the famous maxim of Gœthe which the Society uses as its motto and frontispiece. Certainly it is *ohne Hast*, without haste!

However, the contents are satisfactory when we reach them. The address by the President, Dr. Thomas Addis Emmet, on the exploration and diseases of the female urethra is worthy his wide reputation. It is the result, as he justly says, of years of actual experience and close observation. Obstetrics is embraced in an article on the use of ergot by Dr. J. T. Johnson, on the care of the perineum by Dr. T. Parvin, on electricity in extra-uterine pregnancy by Dr. H. J. Garrigues, on the same disorder by Dr. T. G. Thomas, on measurements of the uterine cavity in child-bed by W. L. Richardson, and on a new method in ruptured perineum by Dr. J. C. Warren. In gynecology, properly speaking, the topic of ovariotomy is treated by Drs. T. M. Drysdale and R. S. Sutton, leucorrhœa by Dr. Fordyce Barker, the cure of uterine fibroids by J. K. Thornton, etc.

The manufacture and mechanical preparation of the volume indicates the customary recherché taste of the publication committee.

A Digest of Materia Medica and Pharmacy. By Albert Merrell, M. D. 1 vol. 8vo., pp. 512. P. Blakiston, Son & Co., Philadelphia.

The term "eclectic" has been misappropriated by a class of physicians, and brought into disrepute. The writer of the work whose title is above claims to be eclectic in its true sense. Refusing his assent to any theory which is not verifiable, he announces himself as a believer in the specific power of drugs, that is, their potency to influence directly the tissues or organs affected by a disease in such a manner as to bring about a cure. This is the "eclectic" property of a medicament, its "specific" virtue. He goes a step further, and neither describes nor recommends any compounds or mixtures. His doctrine is "the single remedy, and its minimum dose." We have never read any argument to show how a single remedy can be any more efficacious than a compound, while we have read many showing the reverse. Everybody knows that any single organic remedy is itself a compound; hence, what logic is there in that position? None.

Leaving these peculiarities aside, the book is carefully compiled and contains a good deal of information about little-used remedies, which may now and then find a valuable field of action. The portion on indigenous articles of the materia medica contains many suggestive remarks.

The Medical Record, Visiting List, and Physician's Diary for 1884. New York, Wm. Wood & Co.

Those who prefer the Messrs. Wood's List will find this edition in all respects equal to those which have preceded it, and manufactured with care.

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PSYCHOLOGY.

We have had occasion in two recent issues to refer to the establishment of a society for psychological research in England, and to express our belief that its labors will result in placing upon a scientific basis those phenomena that have hitherto been relegated to the domain of quackish spiritualism.

That these peculiar occurrences do really happen, and are not merely the fabrications of unreliable persons, we have every now and then indubitable proof, and such cases as the following are by no means of uncommon occurrence:

The daily papers tell us that at three o'clock one morning Dr. Mackey (a prominent physician of Washington) rose suddenly from his bed and began pacing the floor, which disturbing his wife, she asked what ailed him. He answered that he had such a horrible and vivid dream that he could not rest after it. He had dreamed that his friend, Dr. J. Marion Sims, of New York, appeared to him, with a face like that of a corpse, and said to him: "James the Fourth is dead." Dr. Mackey said to his wife that the dream so depressed him that he would not go back to bed again, so he went down to his office and sat there at work until after daylight.

Before breakfast a telegram was brought him announcing Dr. Sims' death at 3 a. m., exactly the hour when Dr. Mackey, rousing from his dream, had looked at his clock. Looking at it again, he found that it had stopped at three o'clock.

Dr. Sims was in the habit of calling himself James the Fourth, as he was the fourth of the same name in his family.

In our own experience we know of the case of an officer of the United States Navy, who, after an absence of three years, arrived in New York. On the night of his arrival, he awakened from sleep in a state of agitation, having dreamed that his most intimate friend in Philadelphia, whom he had last heard from in good health, had just died. He was unable to compose himself, and taking the first train to Philadelphia, found that

his friend had died at the hour of his dream. We can vouch for this story.

Such phenomena force themselves upon us as being more than mere accidents; what the nature of the intimate relationship that thus seems to exist psychically between persons widely separated, is an extremely abstruse problem, and one that may never be solved, but it is exceedingly interesting and is, beyond question, well worthy of careful scientific investigation.

THE TREATMENT OF THE SEQUELÆ OF SUNSTROKE.

As is well known, Professor H. C. Wood is an authority on this subject, and what he says is well worthy of careful attention. Dr. Wood is not a therapeutic trifler; when necessary, he is very heroic in his line of treatment, and he considers the sequelæ of sunstroke one of the instances where trifling will do no good, and the most energetic measures must be instituted.

The usual symptoms, such as headache, dizziness, mental hebitude, and the like, which are intensified in summer, and by excessive artificial heat, are all due to chronic meningitis, either about the base or over the vault of the cerebrum.

Without either syphilis, tubercle, sunstroke, or some other injury, as a cause, he considers meningitis as almost an impossibility.

It may be that sunstroke will act as the exciting cause, and set up the disease, when a latent syphilis has been in reality the predisposing cause.

There is no tendency to spontaneous cure in these after effects, though treatment can do much, but it must be energetic. Counter-irritation with mercury and iodide of potassium are his sheet-anchors. If a city were on fire, you would not attempt to extinguish the flames with a whole lot of little squirts; neither would Dr. Wood expect a blister to produce sufficient counter-irritation to cure a case of chronic meningitis. He uses the actual cautery (Paquelin's), and he uses it repeatedly: as fast as one sore heals, he uses it again and again until he has cured the disease.

On the raw surface he applies antimonial ointment for a few hours; in a few days the nape of the neck presents a sight to behold, but it cures, and that is what we are after. It leaves a scar for life, but it cures the patient. If possible, he sends the patient to a cool climate in summer time. The Rhigolene spray directed on the part will so obtund its sensibility that the cauterization will be painless.

REMARKS ON PHYSICAL CULTURE.

It was a timely action on the part of the trustees of the University of Pennsylvania to institute a Department of Physical Culture. There is, indeed, a great deal of attention paid to various forms of athletic and gymnastic sports throughout our land, but how little of it is guided by that which should be the moving principle of all, to wit: the improvement of health? Too often the consequences are detrimental rather than beneficial. Over-training, excessive exertion, ill-directed efforts are as hurtful as judicious exercise is invigorating.

There is ample scope for such a deparment. We need the lines to be drawn clearly, and the information to be scattered widely as to the limit where muscular strain overrides intellectual activity, and where it defeats itself by excess. It is not the utmost physical strength which is the goal, but the symmetrical development of mind and body. That amount of exercise is most judicious which qualifies the man to do his best mental work. In many cases this is a moderate amount; in some very little indeed.

Sex, age, predisposition, and present condition are elements which must be taken into consideration in advising exercise. Few among physicians have closely examined this subject, and there is need of much more light on it. This is sadly evident by the fact that while the University of Pennsylvania is about founding this department, Girard College, with eleven hundred boys, has just torn down its gymasium, erected but a few years ago at a cost of $3,000!!

A sanitary convention has been recently held at London, Ontario.

OINTMENTS FOR FRACTURES.

It will amuse our readers to learn that a juror in an important case was recently excused from duty by one of our most intelligent and respected judges in this city on the following flimsy excuse. The *Evening Telegraph*, December 10, 1883, says:

"Shortly after one o'clock one of the jurors informed the judge that he was suffering severely from a fracture of the shoulder which he received several days ago. He had been using an ointment, the application of which he omitted this morning, because of its unpleasant odor; owing to this omission, the pain had increased. The judge at once adjourned the case until to-morrow morning at 10, expressing the hope that the shoulder might improve in the meantime."

Now, we are not jurists, but the only particularly bad-smelling ointment that we know of is an ointment made of iodoform, and our readers are familiar with the usual applications of this odorous drug. From a professional standpoint, we would advise our distinguished judges to consult some medical authorities before they again accept such extremely flimsy excuses.

Notes and Comments.

Classification of the "Porro (?) Operations." What is a True Porro-Cæsarian Operation, and What Other Forms of Uterine Ablation in Pregnant Women Have Been Erroneously Called "Porro," and Should be Separately Classified.

Dr. Robert P. Harris, of Philadelphia, states, in *The American Journal of Medical Sciences* for October, 1883, that, from a careful examination of the literature of this subject, he finds that we have no less than nine forms of operation, some of them differing very materially from the original, all called by the name of "Porro," and classified together, although having very different rates of mortality. It is hardly necessary to claim that this is very unjust to the originator, and unfair to his operation. If the Porro method is to stand upon its merits, rated by its proportion of cures, we must in justice exclude from the record all the cases not strictly deserving of the title. As it would only complicate matters to make nine orders of cases, Dr. Harris proposes to combine them where this can be fairly done, and thus reduce the list to four classes.

1. { True Porro operations.
   { Porro-Müller operations.
2. Puerperal utero-ovarian amputations, with the pedicle dropped in.
3. Premature ablations of the gravid uterus, the fœtus not being viable.
4. Prévôt's operation, miscalled "Porro." (Utero-ovarian amputation after laparotomy for rupture of the uterus.

Dr. Harris appends a tabular record of 140 cases, from which it appears that the Porro operation, carried out as originally designed, has saved $46\frac{14}{41}$ per cent. of the cases; the Porro-Müller method, unmodified, has saved $52\frac{4}{9}$ per cent.; and the combined, $48\frac{8}{29}$ per cent. of the women, and 90 out of 118 children.

Passage of Liquids Through a Tracheal Wound.

M. Lalesque, in a memoir in the *Jour. de Med. de Bordeaux*, reports an interesting case where all the liquids swallowed passed by the tracheal wound after the operation of tracheotomy. The conditions which render this accident possible are:

1. The production of a tracheo-œsophageal ulceration.
2. A wound of the œsophagus.
3. Diphtheritic paralysis.
4. Functional incoördination of the laryngeal and pharyngeal muscles.

In M. Lalesque's case, everything pointed to the existence of one of those tracheo-œsophageal ulcerations, which are frequently produced by the pressure of the canula on the tissues with which it comes in contact. But the liquids passed directly downwards vertically into the tracheal wound and the recovery of the child within ten days proved that no ulcerations existed.

As the rejection of liquids commenced on the eighth day, it could not be caused by diphtheritic paralysis, as it ceased ten days later. M. Lalesque considers that it was due to the form of incoördination between the respiratory movements and the second period of deglutition, described by Trousseau, and later on by Archambault. Liquids introduced into the pharynx, if not swallowed before inspiration takes place, are drawn by this act into the trachea at the period of the malady when the larynx is no longer filled up with false membranes. Against this form of dysphagia we have few resources; the use of the œsophageal tube is difficult in children, and still more so on account

of the presence of the canula. M. Lalesque had recourse to the means recommended by Archambault of nutritive enemata, and with success.

Sudden Luxations in Acute Articular Rheumatism.

At a recent séance (Oct. 31) of the Society of Chirurgie, Prof. Verneuil read a paper on this subject. During the course of acute articular rheumatism, sudden luxation may occur, without concomitant suppuration, and with complete integrity of the bones composing the joint. The dislocation is easily reduced and the functions of the joint are generally completely reestablished. These cases are not extremely rare, for M. Verneuil has observed seven.

Medical literature is not, however, rich in analogous observations; a case was reported by M. Marjolin in the thesis of Gibert in 1859. Those reported by Lesauvage, of Caen, and by Parise, cannot be considered in the same category for suppuration of the joint occurred and bone lesions ensued. M. Verneuil observed his first case in 1845; in this, and the first two subsequent observations, luxation occurred at the hip-joint. In two other cases it was observed at the knee; in the second of these an attempt at working the joint was made, when luxation recurred, and became irreducible. The joint became very painful; anaplastic resection was made, but finally amputation was rendered necessary by the abundance of suppuration. The patient succumbed.

In some of these cases, luxation is brought about by hydarthrosis, but in others, where no liquid is effused in the joint, M. Verneuil is of opinion that the dislocation is produced by con tracture of the posterior and paralysis of the anterior muscles.

A Clinical Study of Abscesses.

Mr. Nairne concludes an exhaustive article in the *Glasgow Med. Jour.*, October, 1883. with the following deductions:

1. The early years of life are those in which abscesses are most common.

2. Both sexes are equally subject to abscesses.

3. The upper part of the body is the commonest site of abscesses in the female sex.

4. The lower part of the body is the commonest site in the male sex.

5. The parents of such as have suffered from severe abscesses are themselves (either one or both) phthisical or strumous.

6. The average duration of treatment of curable abscesses is two weeks.

7. Abscesses fall naturally into two divisions—*a*. Simple. *b*. Indicative.

8. Simple abscesses require little treatment: have a tendency to spontaneous cure.

9. Indicative abscesses require great attention; have no tendency to cure, but rather to become chronic.

10. Indicative abscesses indicate constitutional affection—*a*. Of the osseous system. *b*. Of the glandular system, or of the cellular or any tissue other than osseous.

11. The constitutional affection of the bones is the least fatal.

Antiseptic Frigidity of Wounds.

The *Lancet*, September 29, 1883, says:

The healing of open wounds is said to take place more slowly under the influence of antiseptic dressings. It would seem, according to M. Gosselin, that the antiseptic substances exert an antiphlogistic action on open wounds. In preference to speaking of such an effect as antiphlogistic, M. Gosselin would use a new term—frigidity. By frigidity, then, we are to understand the slowness of reparation and cicatrization of an open wound. In 1879 and 1880 MM. Gosselin and Bergeron showed that antiseptic agents impede the alteration of the blood about wounds, not only by putrefying the atmosphere of the germs of putrefaction, but by rendering the extravasated blood less liable to undergo putrefaction. It has been since determined that this change in the blood also takes place within the capillaries, and consists, in fact, in a coagulation of the albuminoid materials. Weak solutions of carbolic acid, alcohol pure and diluted, and camphorated brandy, all give rise to coagulation of the blood in the capillaries, as well as outside the vessels. The circulation is thereby arrested, and this occurs without any vascular contraction. The stronger the antiseptic solution, the more rapidly was the circulation arrested. Moreover, Gosselin believes that this limited amount of arrest in the circulation is not accompanied by any gangrene of the tissues.

Sub-peritoneal Fibroids, complicating Labor.

Before the Academy of Medicine in Ireland (*Dublin Jour. Med. Sci.*, August, 1883,) Dr. Kidd reported the case of a lady whom he had attended in several confinements, each of which was complicated by the presence of a large mass of subperitoneal fibroids. In none of her labors had hemorrhage followed delivery, but there was always great collapse. The danger of such tumors

depended almost entirely on their site; if low down, they were liable to pressure, and might gravely obstruct labor. They might then be lifted out of the pelvis by the use of water-bags distended within the rectum. He had employed this device in many cases with complete success. Dr. Beatty had recorded a singular case, in which the tumor had been spontaneously lifted out of the pelvis during labor. Such an occurrence, however, was very exceptional. If the obstructing tumor could not be lifted up, the case became an extremely anxious one, and might even necessitate the resort to a Cæsarian section. Subperitoneal tumors did not often interfere with postpartum contraction of the uterus. Hemorrhage he had rarely seen in such cases, though he had always taken the precaution of administering ergot during the labor.

Polypus of the Vocal Cord.

Before the Academy of Medicine in Ireland (*Dublin Jour. of Med. Sci.*, July, 1883), Dr. Walter Smith related a case in which he had successfully removed a small polypus from the right vocal cord of a lady, aged thirty years, by Voltolini's sponge abrasion method. About Christmas, 1881, loss of singing voice came on. This was followed by hoarseness, which persisted for a year. In December, 1882, the patient consulted Dr. Smith, who recognized the existence of a pale, red pyramidal tumor attached to the edge and lower surface of the anterior third of the right vocal cord. After a short preliminary training he succeeded in passing a moistened sponge, about the size of a hazel-nut, beyond the growth, and then forcibly withdrawing the sponge through the rima and bearing towards the right, was fortunate enough to detach the little tumor, which came up adherent to the sponge, and was preserved. Immediately after the operation, voice was restored, the hoarseness had disappeared, and she was able to sing. Six weeks subsequently she reported herself as perfectly clear in voice. The operation is a safe and painless one, and suited to a limited number of cases.

Probable Epithelioma Cured without the Knife.

While we very much doubt the correctness of diagnosis, whenever we see the report of a case of epithelioma cured without the intervention of a knife, yet we note the following case, since a reasonably fair trial of the method recommended will not prejudice the case for future operation, unless this be too long delayed.

Mrs. B. had a circumscribed induration as large as an almond in the cheek, having its mucous surface much eroded by contact with the sharp edges of a tooth cavity. The offending tooth was at once extracted, but the removal of the local irritant was followed by no improvement in the bad appearance of the inner cheek. The swelling and induration became greatly increased, and extended forward so as to produce very marked external deformity. It was treated as follows:

℞.	Tinct. opii,	℥ ss.
	Tinct. myrrhæ, }	āā ℥ j.
	Glycerinæ, }	
	Squibb's liq. ferri subsulph.,	℥ ss.
	Aquæ rosæ,	q. s. ad. ℥ iv.

M. S.—Apply one teaspoonful of mixture to inside of affected cheek four times a day.

In addition to this local treatment the patient was ordered milk diet, with strong broth, and twenty drops of the syrup of iodide of iron, three times a day. In three weeks seven-eighths of the enlargement and induration were gone, the cheek and lip became thin and flexible, and all the angry appearance had vanished.

We are pleased to see that Dr. S. W. Francis, who reports this case in the *Boston M. and S. Jour.*, Sept. 27, 1883, calls it *probable* epithelioma. Such prudence in so doubtful a case is commendable.

Relief of Internal Strangulation by Alternate Hot and Cold Applications.

We read the following in the *Medical Record*, October 13, 1883:

A man, forty-two years of age, who had some years previously suffered from a severe attack of peritonitis, was suddenly seized with violent colic. There was meteorism, the abdomen was generally tender on palpation, but more especially at a point a little to the right of the umbilicus. There was no passage either of fecal matter or of gas from the bowel, and purgatives, whether administered by the mouth or the rectum, brought no relief. The obstruction of the bowels continued several days, despite an active and varied treatment, stercoraceous vomiting set in and the patient was rapidly sinking. At this time, all other measures having been tried in vain, Dr. Roux (*Lyon Médical*, September 9, 1883,) determined to try the effect of the alternate application of heat and cold to the abdomen. An ice-bladder was first applied and retained for an hour, then it was removed and compresses as hot as could be borne were placed over the abdomen. These applications were continued every hour through the day and night. In the evening some gas escaped from the bowel, and the following morning there was a slight stool. A mild purgative was now

given, and was soon followed by a copious evacuation, and the patient speedily recovered.

Spontaneous Pyohemia.

M. Guyot, at a recent séance of the Soc. Med. des Hopitaux, reported a very interesting case. It occurred in a gentleman, thirty years of age, wealthy and living under excellent hygienic conditions in the country.

The patient at first complained of slight pains in the muscles, which were prescribed for as resulting from a slight cold. Forty-eight hours later, the pains were felt in the synovial sheaths of one of the wrists, and from thence they spread to those of the forearm, and later to those of the lower limbs.

On the fourth day the patient died. There was nothing abnormal about the urine, and no cause to suspect infectious rheumatism; the patient succumbed to true spontaneous pyohemia.

Iodoform Plasters.

In cases where iodoform is employed topically as a resolvent on the intact skin, MM. Pape and Fischer recommend the employment of plasters, composed as follows:

℞.	Iodoformi pulv.,	100 parts.
	Emplastr. adhesiv.,	200 "
	Empl. plumbi. oxid.,	200 "

M.

Or one containing a smaller proportion of iodoform:

℞.	Iodoformi pulv.,	50 parts.
	Emplastr. adhesiv.,	500 "
	Empl. plumbi. oxid.,	300 "

M.

The absorption of the iodoform is favored by softening of the epidermis through prolonged contact with an impermeable covering.

Opacities of the Cornea.

The following collyrium is recommended by M. Michel for the treatment of spots on the cornea:

℞.	Sulphate of cadmium,	5 centigrams.
	Mucilag. acaciæ,	10 grams.

M.

The opaque spot is touched twice or thrice daily with a camel-hair brush wet in this solution. The application is painful at first, but as soon as it ceases to become so the proportion of sulphate may be increased. When the opacity is of recent origin a favorable effect is rapidly obtained; when it is of old date, the treatment must be persisted in for a longer period.

German Anti-spasmodic Mixture.

The following prescription is taken from the German pharmacopœia, and is much used as an anti-spasmodic in hysteria.

From fifteen minims to a half drachm or more may be administered in potion or by enema two or three times daily.

The dose may be increased when the convulsive accidents are of great intensity:

℞.	Tinct. assafœtidæ,	℥ss.
	Tinct. castorei,	℥ss.
	Tr. opii,	℥j.

M.

Purgative Liniment.

The following preparation is recommended in *Zeitschrift der West. Allg. Apoth.-Verien*, in cases where it is impossible to administer purgatives by the stomach:

℞.	Tinct. colocynth.,	ʒ ix.
	Ol. ricini.	ʒ xx.

M.

Every morning and evening about one teaspoonful of this mixture may be rubbed in over the abdomen.

The tincture is prepared by the maceration of one part by weight of fresh colocynth seeds in ten parts of concentrated alcohol.

Glycerine in Febrile Conditions.

M. Semmola has found glycerine of great utility in fevers of long duration, like typhoid fever, in arresting denutrition, and limiting febrile consumption. It is particularly indicated when it is feared that the administration of alcohol, so common to-day, may have too exciting an action on the nerve centres.

M. Semmola recommends the following mixture:

℞.	Glycerin. pur.,	℥ j.
	Ac. citric,	gr. xxx.
	Aq. distill.,	℥ xvj.

M. One or two tablespoonfuls every hour.

The Use of Iodoform after Cataract Operations.

To the Clinical Society of Maryland (*Maryland Med. Jour.*, November 24, 1883), Dr. Bermann spoke of the advantages of iodoform as a dressing after cataract operations. He dusts it on the wound and draws the lid over it. He believes that the layer of iodoform which rubs off on the dressing prevents access of germs.

Dr. Frank had examined a case thus treated by Dr. Bermann, and was struck with the rapid healing. On examination forty-eight hours after the operation, he found the wound closed and complete absence of all irritation.

CORRESPONDENCE.

Is Iodide of Potassium a Specific for "Facial Erysipelas?"

EDS. MED. AND SURG. REPORTER:—

While perusing the pages of your valuable journal my attention was called to an article entitled "Treatment of Facial Erysipelas with Iodide of Potassium," in which the writer, J. B. Johnson, M. D., of Washington, D. C., asserts, as his opinion, that iodide of potassium is a specific for the above-named disease.

I hope the doctor will be kind enough to pardon me for expressing myself upon this subject, for I feel that I must say something concerning this "specific medication."

The article conveys a very different idea from the one the doctor has expressed. He says, by way of introducing his treatment, he begins with "a dose of pills," composed of two "mercurial preparations," follows this, "in three or four hours," with a dose of "salts." He does not wait for the action of this medicine, but prescribes at once:

R.	Iodide of potassium,	℥ i.
	Tinct. hyoscyamus,	℥ ii.
	Tinct. aconite leaves,	gtts. xij.
	Aquæ distil.,	℥ vj.
M.		

Of this he gives a tablespoonful every hour, while at the same time he applies locally the following:

R.	Hyposulphite of soda,	℥ j.
	Carbolic acid, No. 1,	℥ iss.
	Aquæ distil.,	℥ viij.
M.		

This, briefly stated, is the gentleman's treatment for erysipelas of the face; and upon this is based, what he considers, conclusive evidence of the specific action of iodide of potassium in the above-named malady.

Permit me to state, first, that I am not an advocate of "specific medication." An experience of several years' practice will not warrant such an assertion. I understand a specific remedy to be one capable of producing all the changes necessary to bring about a normal condition. If potassii iodidi is a specific for "facial erysipelas," it must be able to perform its work alone and *unaided* by other remedies, which is surely *not* the case in the course of treatment mapped out by the gentleman.

The first step taken by the doctor is the most important one in the entire treatment, and exerts a greater influence than does the iodide. He removes the cause, no doubt, by promoting free secretion, thereby removing the poisonous matter contained in the bowels, thus relieving congestion and reducing inflammatory action: a very important feature in the treatment of this disease.

The gentleman must not forget that to aconite and hyoscyamus there is considerable therapeutic value attached in the treatment of the above-named disease, as also is the case with the remedies mentioned in his local application.

Now, if iodide of potassium is a specific for "facial erysipelas," why burden the system with six or a dozen other remedies.

I have treated a great many cases of the above disease, have used the iodide alone and in combination with other remedies. When used alone the iodide did not seem to have any specific effect. It always operated better when combined with other remedies. I have not been so successful with the iodide as has Dr. Johnson, and would be pleased to hear the report of a few cases where he had used the remedy alone and not in combination with other remedies.

Cantril, Iowa. J. E. HAINLINE, M. D.

Merit Vindicated.

EDS. MED. AND SURG. REPORTER:—

I am the fortunate possessor of all the volumes of the REPORTER, and in perusing lately Volume IV., bearing date 1860, my attention was attracted in that perusal to the notice of a treatise on fever by Rezin Thompson, M. D., of Nashville, Tenn. One of the first items of information given us by the reviewer is that "Dr. Thompson has a *mission* to perform. This mission consists in laying before the world a *discovery*, a *grand* discovery, made by himself." (Dr. T.) And what that discovery is we have communicated to us in the words of the author, in a quotation from his book. Says Dr. Thompson, "The cause of all malarious, epidemic, and contagious fevers is organized existences—infinitesimal animalcules or sporules—which float in the atmosphere, and are inhaled with it into the lungs, and permeating the lining of the air vesicles, enter the blood, and by it are carried to the nervous centres, where they act as narcotic poisons."

Such were the declarations of a medical author in respect to the etiology of the most extensively prevalent and fatal character of diseases which afflict mankind, uttered only a little more than two decades ago; and the following is the commentary on the part of the editor of one of the most popular and widely-circulated medical publications in this country, within the same period of time: "Cruel things! Wicked animalcules! Evidently Dr. Thompson has seen them, not only flying about, but actually perforating their way through the air-vesicles into the capillaries; and perhaps at a day not far off he will give us descriptions and drawings of each species of animalcule causing a peculiar type of fever. They will all be named after Thom(p)son. Whether they are infinitesimal excentrically or concentrically, Dr. T. does not inform us, for which we are sorry."

Without personal interest in author or reviewer, in relation to the foregoing, it may not be presumptuous to claim, I assert, that, in the light of recent disclosures, the promulgations of Dr. Thompson on the causation of the forms of disease, as enunciated in his treatise, and constituting the subject of this article, entitle him to be ranked in the category of medical philosophers and discoverers. All honor to him for the acumen and sagacity shown in view of the fact of his announcement of the germ-theory of disease, when to publish his conviction of its truth, drew upon him the barbed shafts of ridicule. If living, what must be his satisfaction to find his declared views as to the causation of the diseases which most call into requisition the exercise of the phy-

sician's skill, confirmed by the highest medical authority in the world, and becoming the accepted doctrine of the whole medical profession! How appreciative must he be, if alive, of the eloquent words of Tyndall, when read in the consciousness and recollection of having years before announced the same ideas: "We have been scourged by invisible throngs, attacked from impenetrable ambuscades, and it is only of late that the light of science has been let in upon the murderous swarm of our foes!"

Concerning the skepticism of the world, and especially physicians, Dr. Thompson's critic quotes him in language of singular pertinence and rebuke, and which must be acknowledged as having a remarkable exemplification in his own experience. The doctor, in the quotation alluded to, states, that he is "aware that we are all slow to acknowledge anything to be great which is the work of a contemporary, and especially a fellow-citizen and an equal: it requires the charm of distance, of time, or space, to throw around any great discovery that prestige which commends it to our acceptance." It was ever thus. It is another illustration and proof of history ever repeating itself.

Philosophers and men of science are generally in advance of their epoch. Most men of ordinary capacity soon become able to detect and diagnose disease in its usual phases; but it is the part of the true philosopher to unravel obscure cases, penetrate into the arena of pathology, drag disease from its secret lurking-places, and discern light where to others all is darkness and obscurity. Was not Dr. Rezin Thompson such a type of man? J. H. Thompson, M. D.

Goshen, N. Y., Nov. 10, 1883.

Comparative Value of Various Methods of Investigation.

Eds. Med. and Surg. Reporter:—

An editorial in the Medical and Surgical Reporter, December 8, 1883, p. 635, refers to a suggestion made by myself in a lecture recently delivered before the Alumni Association of the Philadelphia College of Pharmacy on "The Relation of Pharmacy to Therapeutics," with regard to the advisability of establishing a pharmacological laboratory at Washington under the control of the Government, for the study of drugs. The editorial compares this plan with other methods of investigation, and says that although there is much to be said in favor of it, it would have to be carried out with great caution to prevent it from falling into the grasp of the politicians on the one hand, or, on the other, from being manipulated for the merely commercial interests of one or two firms. I agree with the editor that either would be utterly destructive of its value, but I confess myself surprised that the dangers are so great as the learned gentleman is disposed to believe, although the opinion of one who has occupied such a high position in the service of the Government must carry with it a great deal of weight.

The editorial admits that "it is a very natural and proper desire on the part of those who introduce new therapeutic agents, or invent novel surgical instruments, to have them fully and fairly tried by the profession as early as possible, and to obtain an accurate opinion as to their value." It becomes a question of great importance, then, how best to accomplish this object. My suggestion is a "collective investigation" of drugs, and their preparations, both new and old, by a laboratory working under the auspices of the Government, and in connection with the hospital service of the country, and the medical and pharmaceutical professions at large. Something more than a study of the physiological and therapeutic effects of drugs is necessary to make the study of drugs a scientific one. Botany, chemistry, microscopy, toxicology, and especially pharmacy, should be recognized, and receive due share of attention in such investigation to have any true progress in pharmacology, and, therefore, the aid of students in these several branches of the science should be evoked as well as that of the physiologist and therapeutist.

What then is the best method of investigation to promote progress in the science of drugs including all its branches? In a monograph entitled "An Old System, and a New Science," published in 1882, I suggested the "collective investigation" plan by means of the "working bulletin system." This consists of sending specimens, or samples, to a large number of practitioners scattered over the land, with a sketch of the drug containing the state of existing knowledge concerning it under all the various heads of the pharmacology and known as a "working bulletin," together with a printed list of inquiries which they are expected to answer from their observations after having used the article; the replies obtained to be counted, dissected, and the result to be declared by the numerical majority. The objection urged against the "collective investigation" plan by the editorial under discussion is that it presupposes an equality of investigating faculty among all respondents, and argues in proof of this assertion that the whole history of natural science shows how erroneous is any such assumption; and we have but to turn to the history of homœopathy, or spiritualism, to note how vastly more important is the observation of one logical mind than the collective unanimity of hundreds of nearly equal general education, but of defective mental training. I admit the force of this argument, but, on the other hand, would appeal in favor of the collective investigation method, as a valuable means of obtaining evidence, which, though not conclusive, is often of great value in directing the minds of future and more scientific investigators, in their consideration of the channels that their experiments shall pursue.

Again, the most valuable drugs in the materia medica have come to us from exceedingly unscientific sources. It is to the ignorant native, Indian medicine man, quack, and old woman, that thanks are due for our first knowledge of nearly every medicinal plant official in the pharmacopœia. Information from unscientific sources, therefore, is of value; information from the profession at large, as represented by a collective investigation, though it cannot be regarded as conclusive evidence, is of still greater value; but the observation of one logical mind although, possibly, more important than the collective unanimity of the

medical profession at large, has too often been set aside by the results of more recent investigations, to be regarded as infallible.

But what we desire as physicians is, of course, conclusive evidence as to the value of drugs as therapeutic agents. The question is, How can such evidence be obtained? The editorial under consideration makes what seems a valuable suggestion. It is the endowment of special laboratories in connection with leading medical colleges, for the express purpose of studying the physiological and therapeutic effects of new remedies, and for reporting upon them from time to time. It is urged in support of this suggestion, that, being connected with extensive clinics and hospitals, the best opportunities are offered for both forms of observation; free from political pressure, wholly in professional hands, controlled by thoroughly trained and honest-minded men, checked in their verdicts by the studies of similar institutions, they present all the elements required for a thorough study of drugs, and an unbiased expression of the results. If the editor will permit me to add to his suggestion that these laboratories be provided with the facilities for studying the pharmacy, chemistry, etc., of drugs, as well as their physiology and therapeutics, I think the suggestion would be more acceptable to those who are devoting their life-work to the study of correlated branches of the science of drugs of nearly if not equal importance.

What we need is some method of investigation more conclusive than any at present in vogue in this country, for the market is flooded with new remedies of which we know comparatively little, and some of which are undoubtedly of value, and we have no way of knowing the good from the bad except by experiments on patients, that do not always redound to our credit. More information is needed with regard to many of them before they are used in practice at all, and more information is needed after they are used as well, so that we may know of their comparative value. While I would still urge the claims of the collective method, I would at the same time seek to found a higher tribunal. Whether it be a government laboratory, or the endowment of special laboratories in connection with our leading medical colleges, probably matters little so long as either are managed with discretion. It would seem to me, however, that a government institution would be more national in character, and might be placed on a basis free from the objections urged by this editorial. Such objections do not obtain against the Smithsonian Institution, though it is run under the auspices of the goverment. The medical service of the army, navy, and marine hospital departments appear to be unbiased as well. Cannot some combination with this object in view be established between them, and such a laboratory organized under the auspices of the Smithsonian Institution?

F. E. Stewart, M. D., Ph. G.

—An active effort is being made in Ohio to form a State Sanitary Association, composed of all citizens interested in the subject of sanitary science and the prevention of disease.

News and Miscellany.

Concerted Action by State Boards of Health.

Reported for the Medical and Surgical Reporter.

There has been a growing conviction among leading sanitarians intrusted with the official execution of practical health measures, that while the work of the American Public Health Association is of inestimable value in promoting the interests of sanitary science and sanitary reform, there is a constantly increasing need for an annual conference of State and other health officials in regard to practical affairs of their every-day work, some part of which work cannot profitably be discussed in a public meeting consisting largely of persons not familiar with its details.

After due consideration, a meeting of representatives of State boards was held at Detroit, during the recent meeting of the American Public Health Association, at which, after discussion, it was decided to call a meeting of the secretaries or other representatives of all State Boards of Health, in Washington, during May, 1884, for the purposes mentioned, and with the view of organizing a section devoted to State Board work in the present Association, or the formation of permanent separate organization especially adapted to the needs of State Boards of Health. Drs. Henry B. Baker, of Michigan, and J. K. McCormack, of Kentucky, were appointed a committee to confer with and secure the coöperation of all the State Boards in fulfilling the object of the meeting, and Drs. C. W. Chamberlain, of Connecticut, J. E. Reeves, of West Virginia, and Stephen Smith, of New York, were appointed a committee on organzation, to report at the meeting in May. The American Medical Association meets in Washington in May; and another reason for holding the meeting in Washington is that the representatives of the State Boards may also have an opportunity for conferring with the senators and representatives in Congress from their respective States, in regard to national sanitary legislation. It would seem that whenever the health authorities of all the States shall meet, discuss, and agree upon the course they will pursue with respect to yellow fever, cholera, small-pox, or any disease which endangers public health without regard to State lines or borders, and whenever all State Boards shall act in concert, considerable progress will have been made in solving the problem of what are the best methods for national action in regard to inter-State and maritime quarantine or inspection and disinfection, as well as in the practical control of epidemic diseases within the several States of this country.

Poisoning by Pickled Lobster.

Dr. T. J. Hudson thus writes to the *Lancet*, November 24, 1883:

"Cases of the above have several times come under my notice at this period of the year, when the new season tins of preserved fish are arriving, and the shopkeepers are anxious to dispose of their old stock, usually the cheaper qualities. The other night I was hastily summoned to see a gentleman, who informed me that two hours pre-

viously he and three others had partaken of some pickled lobster, and, going into the town shortly after, was attacked with abdominal cramp, vomiting, and some purging. I found him collapsed, with very feeble pulse, cold, cramped extremities, and retching violently. Three other members of the household were similarly affected, one severely so. An emetic of sulphate of zinc brought up a quantity of the fish, mostly unacted on. Opium and cognac were then taken, and warmth applied, which in thirty-six hours restored them to health. The symptoms appear due to the acetic acid in the vinegar acting on the soldering of the tin, whose contents thus become impregnated with lead. The inferior and old tins, when opened, are often found devoid of liquid, and containing small pieces of the soldering detached among the contents. In the above case, the offending articles had been thrown away, or would have been tested for lead and other impurities.

How the Poor in London Live.

Gaillard's Med. Jour., November, 1883, says:

Under this heading the *Echo*, of September 28, 1883, published the statement that, out of 2,290 persons living in consecutive houses at Bow Common, only 88 adults and 47 children attend any place of worship; while in one street, near Leicester Square, containing 246 families, only twelve are said to be represented in church or chapel. The condition of some of their homes is said to be "pestilential." To get into them you have to visit courts which the sun never penetrates, which are never visited by a breath of fresh air, and which never know the virtues of a drop of cleansing water. "In one cellar was found a father, mother, three children, and four pigs. In another room was a man ill with small-pox, his wife just recovering from her eighth confinement, and the children running about half naked and covered with dirt. In an underground kitchen seven persons were found living, and a little child lying dead in the same room; while another apartment contained father, mother, and six children, two of them being ill with scarlet fever. Immorality is but the natural outcome of conditions like the above. The poverty of many, who strive to live honestly, is described as appalling. In St. George's-in-the-East large numbers of women and children, some of the latter being only seven years of age, were employed in sack-making, for which they got a farthing each, while in one house a widow and her half-idiot daughter were found making palliasses at 1¾d. each. Another woman, who has a sick husband and child, was found employed at shirt-finishing at 3d. a dozen, and by the utmost effort can only make 6d. a day, out of which she has to find her own thread!"

A Large Family.

The Madrid *Estafette* states that a Spanish gentleman, Señor Lucas Nequeiras Saez, who emigrated from his native land to America seventy years ago, recently returned to Spain in a steamer of his own, and brought with him the whole of his family, which consists of no fewer than 197 souls, sons-in-law and daughters-in-law not included. Señor Saez has been three times married. His first wife had 11 children at 7 births, his second had 19 children at 13 births, and his third had 7 children at 6 births. The youngest of this family of 37 is aged 19; the eldest, who is 70, has 17 children, of whom the first-born is 47. Of Señor Saez's 23 sons, all of whom are living, thirteen are married, six are unmarried, and four are widowers; and of his surviving daughters, nine are married. The grand-daughters number 34, and of these twenty-two are married, nine are unmarried, and three are widows; and of the 45 grandsons, twenty-three are married, seventeen are unmarried, and four are widowers. There are also 45 great-granddaughters, and 39 great-grandsons, of whom three are married. Señor Saez has never tasted wine or any alcoholic liquor, and lives chiefly upon a vegetable diet, with but little salt. In spite of his 93 years, he is still hale and hearty, and makes a point of walking briskly for at least three hours every day.

New Jersey Sanitary Association.

The ninth annual meeting was held in Trenton, December 6 and 7. The President, J. C. Bayles, C. E., of Orange, delivered an address in which he advocated sanitary lectures and tracts as a means of popularizing sanitary information. "Marsh Miasm," was the title of a paper by Dr. T. W. Harvey, of Orange. "Germs, and the Value of our Present Knowledge Concerning Them," by Dr. H. P. Godfrey, of Camden. "The Agencies, Natural and Artificial, Affecting the Purity of the Passaic River, below Paterson," by Prof. A. R. Leeds. "Domestic Wells and Cisterns, and their Best Method of Construction," by Dr. I. N. Pinkham, of Montclair. "Appliances for Raising and Distributing Water," by Prof. C. L. Brackett, of Princeton. "Methods of Sewage, Disposal without Discharge into Streams," by Engineer J. J. R. Lewes. "Filtration," by Prof. George H. Cook, of New Brunswick. "School Hygiene," by Prof. H. B. Pierce, of New Brunswick.

Hereditary Polydipsia.

The *Lancet*, November 17, 1883, tells us that a most remarkable genealogical tree has been sketched by M. Weil, of Heidelberg. This tree deals with the branches of a family of ninety-one members, of which seventy are still living. Twenty-three of the individuals of this family have been subjects of diabetes insipidus. Seventeen of these have come under the personal observation of M. Weil. There is no evidence of any other hereditary disease in the family, the units of which enjoy robust health and attain an advanced age. Except for the polyuria and excessive thirst, their health is natural. The quantity of urine passed in twenty-four hours varies in different individuals from six or seven to sixteen or seventeen litres.

Chloroform Administration—A Caution.

In the same journal Dr. R. Hanson Wolstenholme writes:

"While administering chloroform recently for a friend, the patient began to retch, and, in doing

so, detached a small set of teeth, which, through carelessness, I was not aware she was wearing. Fortunately, I was able to remove them before any mishap occurred, but the 'shock' I got will be of service in the future. I have looked into two or three books under the above heading, but do not find any caution about this very obvious danger."

Items.

A new edition of the New England Medical Register will be published shortly.

—An act of incorporation is about to be sought from the Canadian Legislature for a new medical school at Winnipeg.

In the *Boston M. and S. Jour.*, December 13, 1883, Dr. Francis Minot reports a death from heart-clot, following etherization.

It is proposed to hold an extensive International Exhibition of Food, Dress, Habitations, and Educational Appliances, in London in 1884.

The first two fascieuli of the Biographical Lexicon of Physicians of All Times and Peoples, edited by Prof. A. Hirsch and others, have just appeared in Germany.

An association entitled La Societé d'Hygiene du Province de Quebec, has been organized by the French Canadian physicians, with Dr. Tafard, of Montreal, as president.

—The prohibition of the importation of American hams and bacon into France, which had been prohibited from fear of trichinosis, has been rescinded.

—In the *Gazette Médicale de Paris* for November 24, a case of aphasia with integrity of the third left frontal convolution, but with damage of the subjacent white matter, is recorded.

The *Medico-Legal Journal* is one of the new ventures in journalism. It is published under the auspices of the Medico-Legal Society of New York City, an organization composed of members of the legal and medical professions.

—Before leaving Ottawa the Princess Louise presented Dr. Grant with a despatch-box, as a recognition of his services to her during her stay in that city, and it is also rumored that a knighthood is to be conferred upon that gentleman.

—The death is announced at an advanced age of Mr. Robert Tayler, of Brighton (England). The deceased was the Senior Fellow of the Royal College of Surgeons of England. He was admitted a member of the College on April 2, 1813, now over seventy years back.

—A National Hygienic Congress was held in the city of Mexico on October 10, at which a petition was prepared for presentation to Congress, asking that the constitution be amended by the addition of an article placing all sanitary regulations under the jurisdiction of the general government.

—In the *Lancet*, December 1, Dr. H. A. Lawton says the easiest way to decolorize iodine is to add forty minims of a saturated solution of hyposulphite of soda to each fluid ounce of tincture of iodine. Forty minims of the saturated solution contains about thirty-two grains of sodic hyposulphite.

—A new adulterant of ground pepper is a finely-ground preparation of the kernels of olive berries. If a sample of the suspected mixture is scattered upon a mixture of equal volumes of glycerine and water, the pepper floats upon the surface, while the ground olive kernels sink.

—Madame Broca offers a prize of 1,500 francs ($300), to be given by the Anthropological Society of Paris for the best memoir on a question concerning human anatomy, comparative anatomy, or physiology, bearing on anthropology. The first prize will be awarded in April, 1884.

—In a report to the Paris Academy of Sciences, the French physiologists, MM. Chambrelen and Malassez, announce that they have at length succeeded in discovering, in the milk of cows affected with inflammation of the spleen, the bacillus of that disease. They have been successful in their experiments in the reproduction of this micro-organism, and in inoculating animals with it.

OBITUARY NOTICES.

DR. JOSEPH GIBBONS.

Dr. Joseph Gibbons, a prominent member of the Society of Friends, and the publisher of *The Friends' Journal*, of Philadelphia, died suddenly, Dec. 9, at his home at Bird-in-Hand, Pa., aged 65. He was a strong Abolitionist, and took a prominent part in the underground railroad scheme.

MARRIAGES.

COLLINS—TYSON.—At the Church of the Epiphany, in Philadelphia, Thursday, December 6, 1883, by the Rev. G. H. Kinsolving, Dr. Stacy B. Collins, of New York, and Mary, daughter of the late Sarah Pennington and George Maule Tyson, of Cecil county, Md.

CARPENTER—SEALY.—At East Providence, R. I., Wednesday, December 12, 1883, by the Rev. D. I. Odell, Dr. Fred. B. Carpenter, of East Providence, and Dora Sealy, of Brooklyn, N. Y.

FRY—HUMPHREYS.—At the residence of Mr. and Mrs. J. F. Bailey, No. 750 North Twentieth street, Philadelphia, November 27, 1883, by the Rev. Benj. St. James Fry, D. D., (father of the groom), assisted by the Rev. S. W. Thomas, Frank R. Fry, M. D., of St. Louis, Mo., and Miss Nellie Humphreys, of Philadelphia.

KLINE—BOAL.—In Centre Hall, Pa., November 29, 1883, by Rev. W. K. Foster, assisted by Rev. W. E. Fischer, G. W. Kline, M. D., of Potter's Mills, Pa., and Sallie E., daughter of James Boal.

DEATHS.

BARDIN.—At his residence, No. 1823 South Broad street, Philadelphia, December 2, 1883, Almon Z. Bardin, M. D., in the sixty-fourth year of his age.

COLLINS.—At Blackwood, N. J., Wednesday, December 12, 1883, Thomas S. Collins, M. D., aged twenty-seven years.

FASSITT.—At Englewood, N. J., Sunday, December 9, 1883, Dr. Louis Fassitt, in the fifty-eighth year of his age.

JONES.—In this city, on the 12th of December, 1883, Dr. William H. Jones, aged forty-nine years.

MINOR.—Suddenly, at North Salem, Westchester county, N. Y., December 8, 1883, George A. Minor, M. D., aged fifty-seven years.

MORRISON.—In this city, on the 6th of December, 1883, Hiel Morrison, M. D., aged seventy-nine years.

PIERCE.—In this city, James L. Pierce, M. D., in the seventy-eighth year of his age.

SAYLOR.—In this city, Dr. George W. Saylor, in the forty-second year of his age.